BIRD LORE

BIRD-LORE

A BI-MONTHLY MAGAZINE DEVOTED TO THE STUDY AND PROTECTION OF BIRDS AND MAMMALS

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Bird-Lore's Motto: A BIRD IN THE BUSH IS WORTH TWO IN THE HAND

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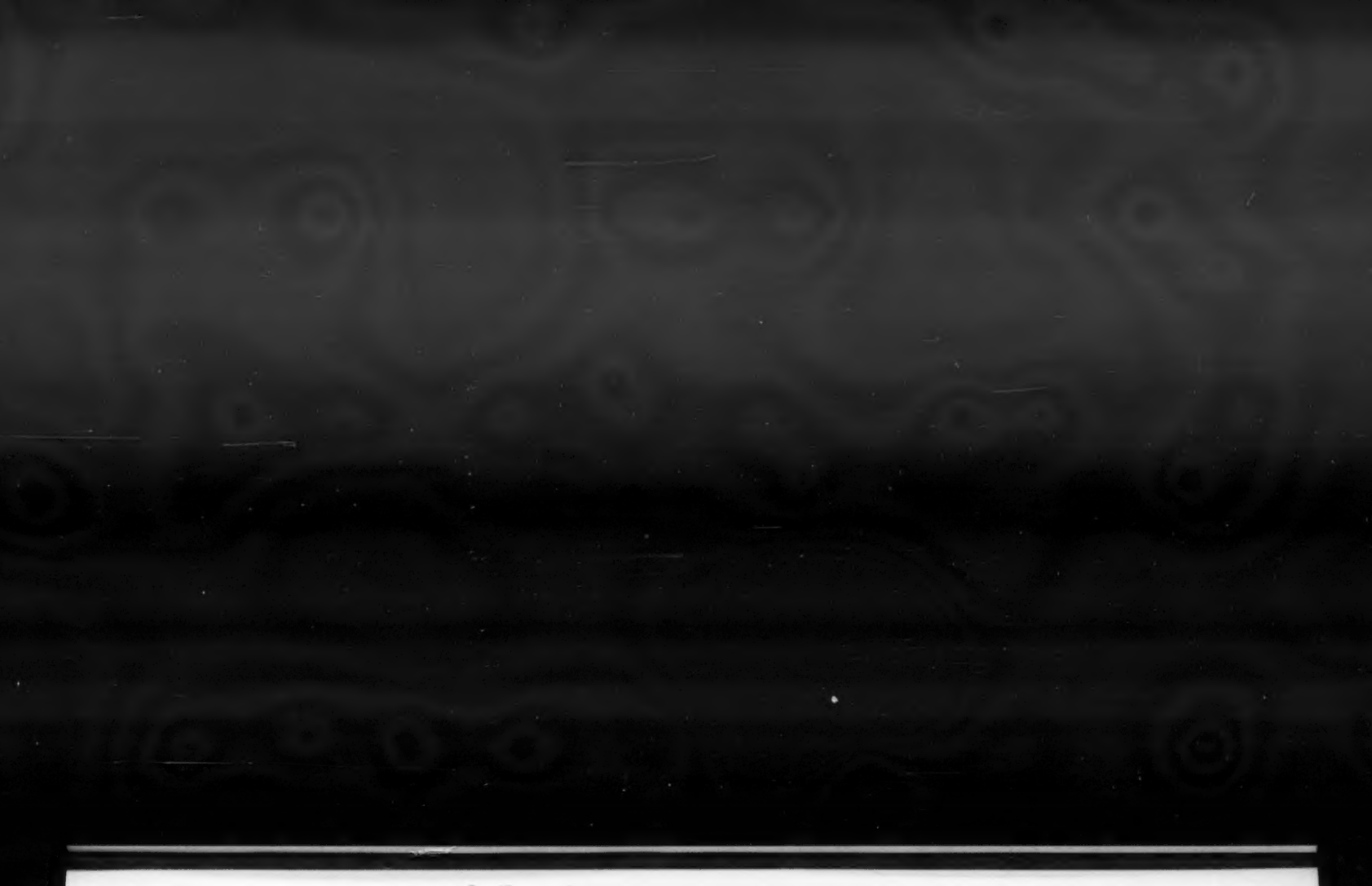


THE PRESIDENT'S PAGE

AN IMPRESSIVE demonstration of the economic value of maintaining rather than interfering with nature's balance is currently afforded by the many adverse ramifications of the drainage of the Everglades in Florida. The city of Miami and near-by communities are faced wtih the necessity of guaranteeing their fresh-water supply for the coming winter season. Wells in many sections of south Florida are becoming salty.

This year, in search of oil, a well was drilled to a depth of 10,000 feet in the Everglades; salt water was found in all horizons; the well has been plugged to prevent near-surface water from pollution by deeper salt water. The potential finding of oil, now thought most unlikely, is the most serious threat to the establishment of the long-proposed and much-to-be-desired Everglades National Park.

South Florida's plight is due to political blunders that resulted in draining the area instead of perfecting water control. Now, at last, moves are on foot to conduct a comprehensive survey of the problem and its intelligent solution, and to initiate adjustments of existing contracts and installation of water-control structures. Our Association, I am happy to say, has played and is now playing a measurable part. Not only the state officials and local communities are aroused, but the President of the United States, the Chairman of the National Resources Committee, and the Secretaries of Interior, Agriculture, and War are definitely concerned.

There are sound grounds for hope, therefore, that the Everglades of Florida may again become a great reservoir for the natural production of birds and other wildlife.

Robert Cushman Murphy

Photo by Elmer C. Aldrich

Avocet on floating nest

BIRD-LORE

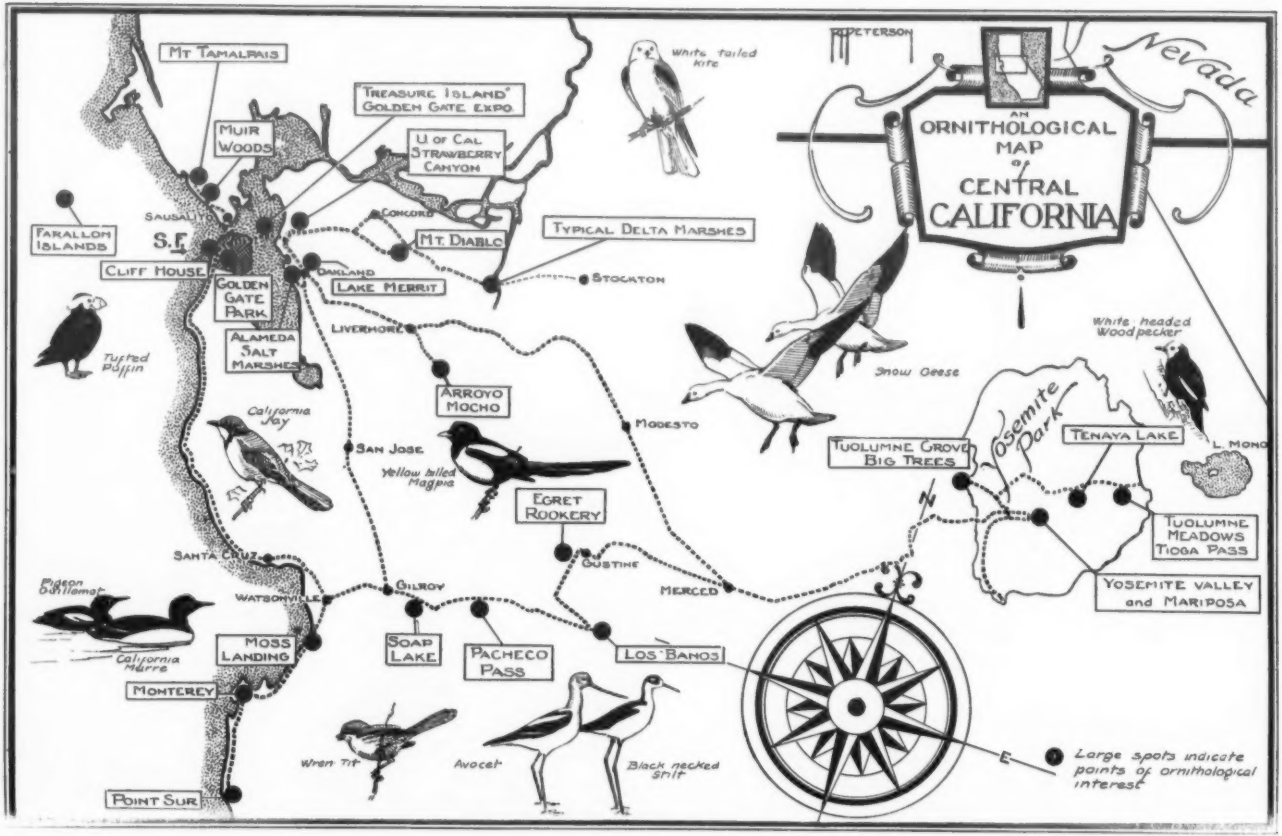
JULY–AUGUST, 1939

An Invitation to Central California

By Elmer C. Aldrich

WITH summer headquarters in the San Francisco Bay region of central California, an ambitious ornithologist has exceptional opportunities which cannot perhaps be duplicated anywhere on the earth. Within a few hours' ride he may go from a distinct desert condition in the Lower Sonoran Life Zone to the Arctic-Alpine Zone above timber line on the crest of the great Sierra Nevada range of mountains. Such a trip of altitudinal change faunistically simulates a much longer latitudinal trip from the southern deserts to the arctic regions of the North. There are also many shorter trips available in the San Francisco Bay region, which offer ample variety of bird life to the visitor from more eastern parts of the United States.

Close about the San Francisco area are places that are relatively unnatural, and yet afford a great variety of bird life easily accessible by public conveyance. Of this type is the famous and very large Golden Gate Park, which occupies a part of the city of San Francisco. On the grounds is the San Francisco Academy of Sciences, containing excellent exhibit groups of some of the places and most of the birds that are discussed here. Other similar areas in the immediate region of the San Francisco Bay are the large campus of the University of California, across the bay in Berkeley, and the wooded Lakeside Park surrounding Lake Merrit in the heart of the city of Oakland. The campus of the university is particularly rich in ornithology because it adjoins Strawberry Canyon which faunally and florally represents a typical wooded canyon of the coast ranges of central California. The campus proper is similar to Lakeside and Golden Gate Parks in that it contains a wealth of luxuriant exotic flora to which many native birds have adapted themselves. For the most part these areas are heavily wooded and are quite similar in their variety of


AN
ORNITHOLOGICAL
MAP
of
CENTRAL
CALIFORNIA
Nevada
PETERSON
White tailed kite
MT TAMALPAIS
TREASURE ISLAND
GOLDEN GATE EXPO.
MUIR WOODS
U of CAL.
STRAWBERRY
CANYON
SAUSALITO
CONCORD
FARALLON ISLANDS
S.F.
MT. DIABLO
TYPICAL DELTA MARSHES
CLIFF HOUSE
OAKLAND
STOCKTON
GOLDEN GATE PARK
LAKE MERRIT
Tufted Puffin
LIVERMORE
ALAMEDA SALT MARSHES
White headed Woodpecker
Snow Geese
ARROYO MOCHO
California Jay
MODESTO
SAN JOSE
Yellow billed Magpie
TUOLUMNE GROVE BIG TREES
Yosemite Park
TENAYA LAKE
L. MONO
EGRET ROOKERY
TUOLUMNE MEADOWS TIOGA PASS
SANTA CRUZ
GUSTINE
MERCED
Pigeon Guillemot
GILROY
WATSONVILLE
YOSEMITE VALLEY and MARIPOSA
California Murre
MOSS LANDING
SOAP LAKE
PACHECO PASS
LOS BANOS
MONTEREY
Wren Tit
Avocet
Black necked Stilt
POINT SUR
Large spots indicate points of ornithological interest

habitats so that most of the species discussed below will be found to occur in all three areas.

Strawberry Canyon, in back of the university campus, is the outdoor laboratory of many of the biological university courses, and is the location of the university botanical gardens. It is excellent for studying birds because of the abundance of good trails and roads. In parts, the canyon is somewhat steep on both sides but a few side canyons open out into rolling hills. One side is heavily wooded with a combination of California live oaks and a lesser shrubby vegetation beneath. The other side of the canyon is more open, with grassy slopes predominating, and with dense oak-wooded draws. Bordering Strawberry Creek in the bottom of the canyon are willows, laurels, and alders, as well as a rank lesser vegetation. Toward the head of the canyon, the wooded conditions become less dominant and change into a dense brushy or chaparral condition attractive to many species of birds that otherwise would not be present. The following sketchy summary of birds present will be essentially correct for all three of the above-described areas. A few species occur only in the more native Strawberry Canyon.

There is a fair supply of Raptores. The Western Red-tail is often seen over the campus and park regions, and sometimes may be seen soaring high over the buildings of the bay-region cities. The Cooper's Hawk may be distinguished from the usually more common Sharp-shinned by its larger size, rounded tail, and its greater tendency to soar. A common but harmless predator is the Desert Sparrow Hawk, which is in this area throughout the year and nests in holes in some of the taller trees of Golden Gate Park and the University of California campus. Three common types of Owls that are resident in the region are the Barn, California Screech, and Pacific Horned Owl. Their presence is usually announced through their calls which are frequently heard during the night or in crepuscular hours as they fly about in search of prey. Screech Owls nested commonly in the large California live oak trees on the campus before tree surgeons stopped up the holes. These birds are still about, however, and find nests elsewhere. Barn Owls are common about the bay region; every year a pair nests in the California stadium, leaving regurgitated pellets as evidence of their presence. On the campus and in Strawberry Canyon, Horned Owls lay their eggs in old nests of the Red-tailed Hawk.

Those people coming to California from states east of the Mississippi River will have opportunity to see a greater number of species of Hummingbirds. In central California one species, the Anna's, is resident throughout the year whereas four other species are common summer visitors or migrants; these are the Black-chinned, Calliope, Rufous, and Allen's. Farther south, below Santa Barbara and in the southern deserts of California, occurs a sixth species, the Costa's Hummingbird. The males of all Californian Hummingbirds, except the Rufous and

the Allen's, are easily distinguished by the iridescent colors of the throat or gorget area. The females are less brilliant and four are relatively nondescript with an iridescent green back. Females of the Allen's and Rufous, however, are more brilliant with orange and cannot be distinguished in the field. A careful observer can distinguish the males on the basis of wing sound rather than color. For courtship purposes, and for purposes of protecting their territories, the males of the western Hummingbirds have specialized flights which, in lieu of their little-developed voices, serve essentially in the same capacity as does the song of Passerine species. The character of these flights varies according to the species, but usually consists of a steep power dive from a height of a hundred or more feet, terminated with a rapid rise. The feathers of the wing tips and the outside tail feathers of the males are so constructed as to produce sounds during these flights, which are characteristic for each species. At the bottom of the power-dive flight of the Anna's an explosive sound is heard, strongly resembling the sharp bark of a California ground squirrel. The Rufous is an early migrant in the San Francisco Bay region in the months of February, March, and April. During this time the Allen's is also present, taking up summer residence, and both of these very active and dominant birds are to be seen nearly everywhere in the gardens of homes and among the flowering vegetation of the hills. The males of these two species do not make a sharp note at the bottom of the power dive, but their tails produce a whining sound which is higher pitched and continuous in the Allen's and lower pitched and broken in the Rufous. The Calliope migrates through in the spring and while in flight produces a sound so high that it is not audible to the ears of some observers.

In the park areas and the hills of the bay region several species of birds are likely to be seen foraging on the trunks and larger limbs of both native and non-native trees. These are the Hairy and Downy Woodpecker, Red-shafted Flicker, Plain Titmouse, Red-breasted Nuthatch, and California Creeper. The Red-shafted Flicker is seen just as often, however, digging in open rolling fields or lawns where ants or other insects are available.

The Coast Bush-Tit, which is resident throughout the year and occurs in flocks of twenty-five or more individuals, may be regularly seen foraging for insects on the smaller branches, twigs and foliage. A flock is held together by the almost incessant twittering on the part of every individual. They are early nesters and by March most of the flocks are broken up and the birds paired off. Their nests are perhaps the most highly developed in North America. They are pendulous affairs made with many types of materials with an opening on the side near the top, and are sometimes a foot long. The writer has found elaborate nests with Cellophane, shredded paper, and even Christmas tree tinsel woven into the complicated structure.

Photo by Elmer C. Aldrich

Hudsonian and Arctic-Alpine zone in the high Sierra Nevada

The Chestnut-backed Chickadee, for some unknown reason, does not occur on the east side of San Francisco Bay, but can be found in Golden Gate Park and in all the redwood regions nearer the coast.

Other birds that feed on the foliage and twigs of trees are the Warblers which, because of the fewer species, present a problem of identification that is decidedly less acute than in some of the more eastern states where they are more abundant. Not only are they fewer in number, but their stay in the region, even the migrant species, is usually not as short as that of other species in the famous flyways of the East. This difference may be due in part to the fact that many species of migratory birds in California do not have to travel as far to reach the boreal conditions offered in the high Sierra Nevada mountains. Thus, in many species the migration is not from south to north, but from west to east. The Audubon's Warbler is one of these; in winter it is one of the most abundant birds about the San Francisco Bay region and by May most of them have acquired their more brilliant breeding plumage and have left for their nesting grounds in the coniferous forests of pine and fir in the Sierran Transition and Canadian Life Zones. Occasionally, the more rare Myrtle Warbler can be distinguished with some difficulty in a group of Audubon's Warblers. The experienced observer may be able to do this by listening for the softer call note of the Myrtle. Warblers seen only in migration in the bay region are the Calaveras, Townsend's and Hermit. The Yellow,

Lutescent, Pileolated, and Tolmie or Macgillivray's are present in spring and summer.

Of the three Vireos present in the region, the Hutton's is present all the year, and the Cassin's (Solitary) and Warbling Vireos are summer visitants. Cedar Waxwings are common migrants.

Most of the birds that catch insect food on the wing are the Flycatchers or Swallows, most of which are summer visitors. The Western Flycatcher nests commonly in this region, and the larger Olive-sided Flycatcher is often seen and heard, mostly as a migrant. The Black Phoebe is resident and nests usually close to water on buildings or bridges. A large colony of Cliff Swallows is present on the Life Sciences Building of the University of California campus, and several other colonies are to be found on buildings in San Francisco, Oakland, and Berkeley.

In heavily wooded areas, such as Strawberry Canyon and in certain parts of the parks, Thrushes are present, especially in the dense undergrowth near streams. The Hermit Thrush is found in winter and the Russet-backed in the summer. In the spring both may be seen for a short time until the Hermit migrates. They are both beautiful singers and the Russet-backed has nearly the same song pattern as the Wood Thrush, but it is on a continuous ascending scale rather than a descending one. In some of the very densely wooded areas Varied Thrushes may be seen during the winter. Their occurrence, however, is sporadic. The California Purple Finch is abundant in the wooded areas about San Francisco Bay and some care must be taken to distinguish it from the Linnet. The former has a less variable song and a sharper note. The striking Black-headed Grosbeak is common in summer and its black and orange coloration cannot be mistaken for any other species.

California has a definite chaparral habitat and many kinds of birds are restricted almost entirely to it. An excellent example of this vegetative type occurs in Strawberry Canyon and in many hills and mountains of the coastal ranges. One species, the Wren-Tit, is endemic to this association. The Wren-Tits should afford a particular attraction to the eastern visitor because this single species, with five subspecies, composes a distinct family, the *Chamaeidae*, which occurs only in the states of the Pacific Coast. Because of their confiding habits, the Wren-Tits are easily observed, and their long tails and dusky streaked under parts make them easily distinguishable from all other birds of similar size. Other species common to the chaparral habitat are the California Thrasher, Bewick's Wren, Brown Towhee, Spotted Towhee, and during the winter the Fox Sparrow is common on brushy hillsides. When in bloom chaparral areas are frequented by many Hummingbirds.

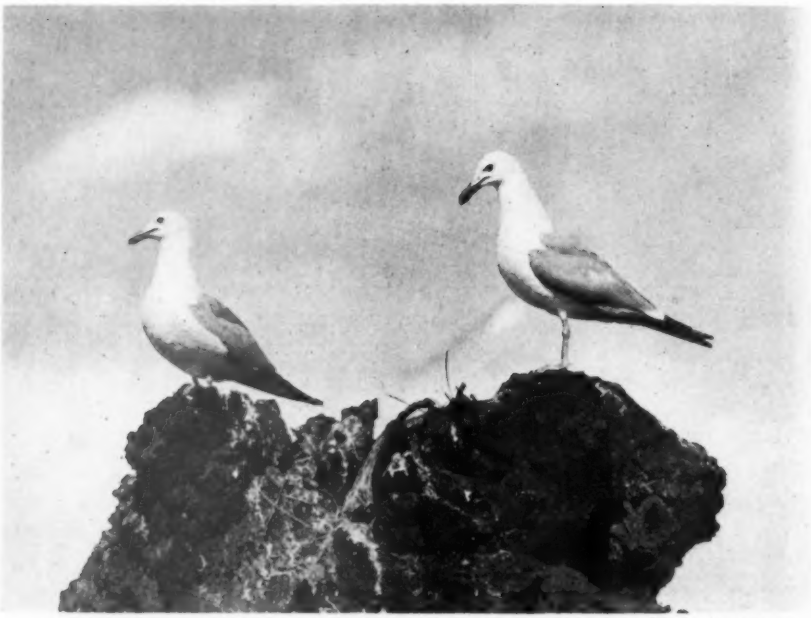
Several species of birds are found in border habitats such as at the edge of fields or lawns. Of these the state bird, the California Quail, is common and becomes quite tame in protective areas. Oregon Juncos

Photo by Elmer C. Aldrich

Golden-crowned Sparrow at bird bath

Brown Towhees, Song Sparrows, White-crowned Sparrows, and Golden-crowned Sparrows are also abundant. In the bay region there are three kinds of White-crowned Sparrows, one of which, the Nuttall's, is non-migratory. The subspecies can be distinguished by an experienced observer by their voice and coloration. Golden-crowned Sparrows are abundant in winter and migrate north to nest.

Visits to the above-mentioned areas or to places with similar conditions will give the visitor a good picture of the land birds of the San Francisco Bay region. During fall and winter many water birds can be observed at close range at Lake Merrit Waterfowl Refuge in the city of Oakland. Here the birds are fed twice daily at two points in the lake. At one place the grain is scattered in and about a fresh-water pond close to a fence where people gather to watch. Here most of the dabbling Ducks get their food. At the other place the grain is dropped into deeper water where the diving Ducks may be seen. Close to the shore there is an artificial island in the lake. Here may frequently be seen, besides the Ducks, a dozen or more Black-crowned Night Herons, and a few Farallon Cormorants. Here also is the nesting ground for the introduced Swans. At one of the feedings at the fresh-water pond during the height of the waterfowl season, the most abundant Ducks are Pintails and Baldpates. For the past several years a single male European Widgeon has visited the



The California Gull is perhaps the most common Photo by W. L. Dawson

lake. Shovellers, many Coots, and a few Green-winged Teals are also present, while occasionally a few Wood Ducks visit the feeding station. Of the Geese there are four species represented. All three subspecies of the *canadensis* group, the Canada, Hutchins's and the small Cackling, may easily be observed together at close range. The Lesser Snow Goose, the Ross's Goose, and the White-fronted Goose are also present. Great rafts of diving Ducks, with the Canvas-back predominating, collect toward the middle of the lake. Every year a few Redheads visit the lake. Both Scaups, the Greater and the Lesser, occur here, and the latter is the more common. American Golden-eyes are common, and one or two Barrow's Golden-eyes are seen every year, usually well out toward the center of the lake. There are many Ruddy Ducks and striking Buffleheads. Eared and Pied-billed Grebes are common, and with care a good student may distinguish a few Horned Grebes. Western Grebes and Red-breasted Mergansers are present near the center of the lake.

In the winter, Gulls are abundant and the California Gull is perhaps the most common. The Ring-billed, Glaucous-winged, and Western are also present and because of the different plumages according to their age, the Gulls sometimes present a problem of identification. The graceful little Bonaparte's Gulls are common in winter, and on some days when there are storms on the coast an occasional group of Short-billed Gulls comes in.

San Francisco Bay, with its irregular outline of shore, also affords excellent sanctuary for waterfowl. When traveling across the bay on the ferry to Treasure Island, the site of the Golden Gate International Exposition, many of the above-mentioned species of waterfowl can be observed. There is usually, however, a predominance of many species that are seen as often in the ocean, such as White-winged and Surf Scoters, Red-throated Loons, and Farallon Cormorants.

On the east side of San Francisco Bay, along the Alameda shore and south to the San Mateo and Dumbarton bridges, which cross the south end of the bay, there are many excellent mud flats that afford excellent feeding grounds for shore birds during the migration season in April and May and from about July to October; some species winter here. Contiguous with the mud-flat shores in many places are extensive *Salicornia* (pickleweed) salt marshes. This plant forms a dense mat over the nearly level areas and makes for easy walking. These salt marshes are generally drained by a myriad of large and small sloughs that afford places for waterfowl. Also, when the tide is low, many shore birds fly inland and probe for food in the muddy bottoms and sides of the sloughs. This is the home of the California Clapper Rail which, with the reclamation of many of the salt marsh areas, may be doomed to extinction. Short-eared, Burrowing, and Barn Owls and Marsh Hawks can often be seen and heard in these marshes. Among the many shore birds on the mud flats are: Killdeer, Semipalmated Plover, Snowy Plover, Hudsonian Curlew (sometimes the Long-billed Curlew is present), Western Willet, Greater Yellowlegs, Least Sandpiper, Red-backed Sandpiper, Western Sandpiper, Long-billed Dowitcher, Marbled Godwit, Sanderling, Avocet, Black-necked Stilt, Northern and Red Phalaropes, several species of Gulls, Forster's Tern and Caspian Tern. A good book, recommended by the writer for field identification of these birds and for all birds in California, Oregon and Washington, is 'Birds of the Pacific States' by Ralph Hoffmann.

An excellent short trip of approximately twenty miles from San Francisco is north across the Golden Gate Bridge to Muir Woods National Monument and to Mt. Tamalpais State Park. At Muir Woods is an excellent stand of the world-famous, giant coast redwoods with its accompanying associations. Here, vegetation beneath the tall trees grows in almost tropical density. The bird life in the dense redwood stands is relatively sparse as to number of species. Such birds as Steller's Jay, Chestnut-backed Chickadee and California Creeper are usually common in any of the central California redwood groves. Pygmy, Spotted, and Horned Owls are often heard at Muir Woods in the evening. Mt. Tamalpais State Park provides varied habitats; most of the birds that would be seen have already been discussed.

South from San Francisco lie many miles of varied coast line that

offer excellent opportunities to observe a variety of sea birds. A trip of about 130 miles from San Francisco to Monterey and Carmel, on State Highway No. 1, will take the visitor to nearly every type of beach available on the Pacific Coast. At the Cliff House area are steep rocky promontories over which the observer may look vertically into the pounding surf below. Off shore a few hundred yards are the seal rocks on which usually are congregated many sea lions, as well as such birds as Brandt's, Baird's, and Farallon Cormorants, Pelicans, and California Murres. On the cliffs about this area the striking Pigeon Guillemot nests. During the migration seasons such species as Black and Ruddy Turnstones, Wandering Tattlers, and Black Oyster-catchers may be seen on the rocky shore lines. Just to the south of the Cliff House area are about eight miles of broad sandy beach. After storms can be found many kinds of dead birds, in the driftwood line, which are washed in and which ordinarily would not be seen from shore. They form a fair representation of all the species that frequent the surf and the water farther from the shore—Red-throated, Pacific, and Common Loons, Black-footed Albatross, Sooty and several other species of Shearwaters, Brown Pelican, Baird's, Brandt's and Farallon Cormorants, Heermann's and several other species of Gulls, California Murres, Pigeon Guillemots, and several other *Alcidae* such as Cassin's Auklet, Marbled, Ancient and Craveri's Murrelets, and Rhinoceros Auklets. Occasionally Ashy Petrels are found. Some of these, as well as many other sea birds, are common nesters on the Farallon Islands located off the Golden Gate.

Proceeding south toward Monterey Bay the tourist will encounter a variety of beaches. At Moss Landing a large lagoon furnishes an excellent loafing ground where some sea birds come to quiet water where they may be more easily observed. Some salt marshes are also present. At the port of Monterey there are several long wharves that extend into the bay. Here, during the winter, excellent comparisons can usually be made at close range of such birds as all three of the Loons and five Grebes, the Pied-billed, Eared, Horned, Western and the rarer Holboell's Grebe. Winter and migration seasons are decidedly the best times to view birds at Monterey. Sometimes it is possible to see countless thousands of Shearwaters, mostly Sooty, fly past by the hour. Occasionally several species of Murrelets come in close enough to be identified. Scoters, Red-breasted Mergansers, a few Old-squaw, and most of the diving Ducks are found on the bay during winter. From Monterey it is possible to take the Seventeen Mile Drive to Carmel and to Point Lobos State Park. Here occurs the world-famous Monterey cypress on the rock-bound coast. There are some rocky islands immediately off shore where Pelicans and other sea birds nest. The algal life of the rocks provides a rich invertebrate fauna upon which feed Oyster-catchers, Turnstones and other rock-foraging species. On a trip farther south to

Point Sur the writer and some other observers have seen all three of California's Swifts, the White-throated, Vaux's, and the rare Black Swift, all flying together. The latter nests in the steep cliffs overlooking the ocean.

Bordering the west side of the great San Joaquin Valley is the Diablo range of mountains. These are largely arid in character and classed chiefly in the Upper Sonoran Life Zone. Good examples of the Diablo range type of country are to be found at Mt. Diablo itself, which is close to the bay region, at Arroyo Mocho, which is a few miles south of Livermore, and on the Pacheco Pass road out of Gilroy toward Los Baños. Of the three places Pacheco Pass probably offers the best variety of bird life for the least energy. For this reason a description of the birds of this area will suffice for the other two. Mention should be made, however, of the occurrence of Phainopeplas, which nest in the blue oaks at Arroyo Mocho, marking the northern known limit of their range.

Photo by Elmer C. Aldrich
Coast Bush-Tit emerging from its nest

Pacheco Pass may be reached from Oakland or San Francisco by going to Gilroy via San Jose, or when returning from Monterey Bay by turning off at Watsonville. A trip from the San Francisco Bay region to Los Baños by way of Pacheco Pass provides an exceptional variety of bird life for a very full day's trip.

About six miles east of Gilroy, to the right of the road, is Soap Lake which, because of its dense stands of tules, cattails and willows, is frequented by many marsh and water birds. Within a few miles of the summit, and across the canyon to the right of the road, will be seen a pinnacle-like mountain. Raptores that are seen in this region include the Cooper's, Sharp-shinned, and Sparrow Hawks, and in the winter the Ferruginous Rough-leg sometimes is present. Golden Eagles are relatively common, and in summer the Turkey Vulture is present. Also nesting on the cliff are Barn and Horned Owls, while Screech Owls nest in the oak trees below. Birds that nest in the sparse

oaks on the hillsides are the Western Mourning Dove, Western Gnatcatcher, California Woodpecker, Nuttall's Woodpecker, Ash-throated Flycatcher, Western Kingbird, Slender-billed Nuthatch, Western Bluebird, Bullock's Oriole, and Green-backed and Lawrence's Goldfinches. In some of the open fields, adjacent to brush, sometimes Grasshopper Sparrows and Road-runners may be seen. Near the canyon bottom grow many California laurel trees and sycamores. The Black Phoebe sometimes is found nesting on stumps of the sycamore near the water, and the Anthony's Green Heron has been found nesting high in the laurel trees.

Proceeding over the summit of Pacheco Pass at 1386 feet elevation allows for a view of the San Joaquin Valley. It is then a steady slope into the Los Baños region, which contains some of the best nesting and wintering grounds for waterfowl in California. Another waterfowl region worth visiting, and closer to the San Francisco Bay region, is on the Borden Highway west of Stockton. On this delta region, where the Sacramento and San Joaquin rivers merge to flow into San Francisco Bay, the White-tailed Kite is fairly common. At the Los Baños game refuge Whistling Swans, numerous Geese and Ducks spend the winter in the many square miles of marshes and flooded fields. By April all the Swans and Geese and some of the Ducks have left to go northward, but many kinds remain. Many types of marsh birds also come in. Ducks found nesting commonly are the Mallard, Gadwall, Cinnamon Teal, Redhead, and Fulvous Tree-duck. Virginia and Sora Rails are found in the marshes, and the Coot is abundant, whereas the Florida Gallinule is less common. Shore birds that nest in the region are the Killdeer, Avocet, Black-necked Stilt, Forster's Tern and Black Tern. These are very abundant and they all coöperate in routing intruders from the nesting ground. Pied-billed Grebes are also common breeders, and White-faced Glossy Ibises and Bitterns are seen in the nesting season. Some of the land birds prominent in the marshes are the Tule Wren, Yellow-throat, Barn Swallow, Savannah Sparrow, Yellow-headed Blackbird, Red-wing and Tricolored Blackbird. The gregarious Blackbirds also assist the shore birds in driving intruders from the common nesting ground.

North of Los Baños, on the road to Gustine, there is an American Egret rookery in a grove of cottonwoods. A few Great Blue Herons nest in the same grove. During the winter the rarer Snowy Egret is sometimes seen foraging with the American Egret.

The trip that shows up California's variety of country at its best is a trip from the San Francisco Bay region eastward to the crest of the Sierra Nevada Mountains. This gives a cross section of the state and takes the traveler from the Lower Sonoran Life Zone through six zones to the Arctic-Alpine. There are several passes eastward over the Sierras, but the one that perhaps would have the greatest appeal to the easterner would be the Tioga

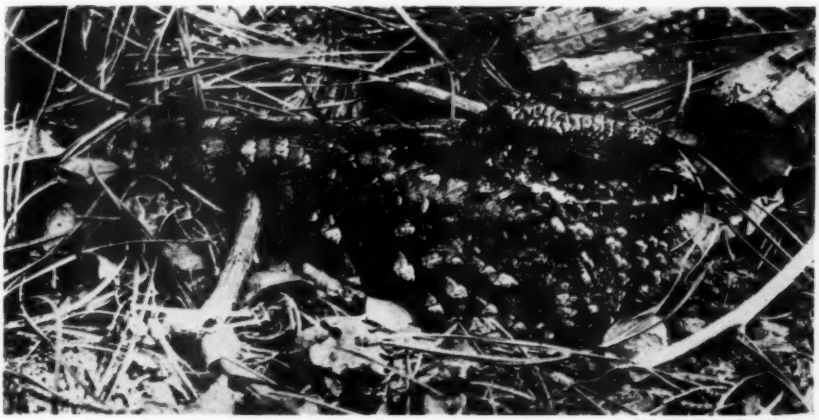


Photo by Elmer C. Aldrich

Dusky Poor-wills are frequently heard at night

Pass, because it goes through Yosemite National Park. This trip may also be made as a continuation from the Los Baños region to Merced. If taken from Oakland, the route is past Livermore and over Altamont Pass by good highway to Manteca, thence to Merced on U. S. Highway No. 99 where a turn is made on State Highway to No. 140 leading to Yosemite Valley. The Altamont Pass is usually quite dry and the vegetation meager. There is a corresponding dearth of bird life, and common sights are California Shrikes and Western Meadowlarks perched on telephone poles. From the pass the road goes down into the Lower Sonoran Zone of the San Joaquin Valley from Manteca to Merced. In this type of country much of the land is farmed and because of the trees about settlements there occur the Western Mockingbird, Linnet, Sparrow Hawk, and in the summer the Western Kingbird is a common sight on telephone wires. Heading from Merced toward Yosemite the tourist almost immediately begins to climb into the foothills of the Sierras. The country on the way to Mariposa, and some parts beyond the terrain, is rolling and possesses the characters of the Upper Sonoran Life Zone. A few birds that may be noticed while driving through this rocky type of country are the Horned Lark, Lark Sparrow, Rock Wren, Golden Eagle, and in summer the Turkey Vulture. Dusky Poor-wills are frequently heard at night. If it be a very hot summer day, it is interesting in the lower and more unwooded areas to see the Horned Larks packed beneath every available bit of shade afforded by rocks and fence-posts.

On the trip, ponderosa or western yellow pines are soon sighted, which mark the beginning of the Transition Zone, changing in character and becoming more luxuriant toward Yosemite Valley with its altitude of approximately 4000 feet. In this article it is futile to attempt a description of Yosemite Valley, the place of many tall waterfalls,

glaciated domes, innumerable cascading streams, and rich coniferous forests. Some of the more prominent birds seen here in summer are: Spotted Sandpiper, Hairy Woodpecker, White-headed Woodpecker, Red-shafted Flicker, Olive-sided Flycatcher, Wood Pewee, Violet-green Swallow, Steller's Jay (subspecies Blue-fronted), Mountain Chickadee, Creeper, Robin, Mountain Bluebird, Cassin's and Warbling Vireos, Audubon's Warbler, Hermit Warbler, Western Tanager, Black-headed Grosbeak, Chipping Sparrow, and Oregon Junco. Probably one of the birds of greatest interest to the eastern ornithologist will be the Water Ouzel or Dipper, a Passerine species adapted for swimming beneath the surface of turbulent streams where it preys on aquatic insects. From the valley a short drive may be made to the Wawona or Tuolumne Grove of big trees. These giant sequoias, the oldest and largest living things, possess a bird life not much unlike that in Yosemite Valley.

Besides the valley, Yosemite National Park has some excellent high country with many trails for the hiker and back packer. A good sample of this back country is available by auto over the Tioga Pass, which may be reached from Yosemite Valley. While climbing from Yosemite Valley, the traveler will enter the Canadian Life Zone characterized by such trees as the red fir and Jeffrey pine. In this type of vegetation such species of birds may be noted as the Sierra Grouse, Hermit Thrush, Golden and Ruby-crowned Kinglets, Calaveras Warbler, Williamson's Sapsucker, and the Townsend's Solitaire.

As soon as altitude is gained, the motorist will again note a change in vegetation. The trees listed above for the Canadian Zone are replaced by the Hudsonian Zone species such as mountain hemlock and white-bark pine. At Tenaya Lake and Tuolumne Meadows one can see snow-capped peaks all about the hemlocks, and white-bark pines sprawl out at timber line on the higher slopes where another zone, the Arctic-Alpine, takes the place of the Hudsonian. In the last two zones, not many birds are seen. A few hardy species such as the Clark's Nutcracker, White-crowned Sparrow and Sierra Nevada Rosy Finch rear their young in this rugged high-altitude country.

As the traveler goes over Tioga Pass at 9941 feet above sea level, whether he is a biologist or not, he undoubtedly cannot fail to appreciate the great changes in plant and animal life that have taken place before him. These striking changes are brought home to him because of the rapidity with which they have taken place within a few hours' ride from sea level to timber line. One word that might describe California is *versatility*. In summary, it possesses seacoast, deserts, inland bays, lakes, many rivers and streams, and high mountain ranges including the highest mountain in the United States, Mt. Whitney, and the lowest point in Death Valley. California, with its amazingly varied topography and its different climates, makes for an excellent blend of scenic and scientific values.

The Nature of Things

By

DONALD CULROSS PEATTIE

CALIFORNIA has been rocked these past months with discussion of the Kings River project for the creation of a National Park closely adjoining Sequoia National. One of the most winning suasions offered, from my point of view, was that under the original proposal Kings River Canyon should be named the John Muir-Kings Canyon National Park. For it was in the canyon that John Muir wrote his most famous and exquisite ornithological essay on the Dipper or Water Ouzel.

Those *pro* the new park, and those *contra*, have harangued us and invoked the highest moral reasons. Petitions for both sides came to me as they may have come to you. It is well, before making up our minds, however, to know what happens when a National Park is created and how it differs from lands administered by Forest Service as the Kings River Canyon has been.

A National Park is, except for fishing, a complete wildlife preserve. Not a creature may be hunted, not a tree felled, not a flower picked. Many animals, like the deer and even the bears, are publicly fed by the park authorities. So, the most pre-Adamite congeniality between man and his fellow creatures prevails in these Edens where there is nothing they need fear from him.

All this would seem to leave no doubt about putting primeval wilderness under the parks. Yet there is doubt. American citizens have decided that the parks are primarily free vacation grounds. At Yosemite last May, authorities told me that 11,000 visitors were expected on Memorial Day. To accommodate such crowds the parks have to meet a housing problem of city proportions. Hotels are needed, of various price levels. Stores and shops of many sorts, in the more popular parks, inevitably come in. Because Americans have lost the use of their legs, motor roads must be built to the top of peaks once accessible only to Eagles and alpinists. It is pleasant, it gives one a thrill of patriotic pride, to see thousands of people innocently enjoying the grandest Nature. But wilderness such spots then are not. When deer stand around waiting to be fed, all that *is* a deer seems to me to go out of them; they are become cattle. I would rather see a big grizzly once a year, and feel a thrill of fear of him, than to find three bears pawing out the con-

tents of my cabin garbage pail, and say "Boo" to them and have them scamper like small hooligans on Hallowe'en.

* * *

Consider an area under Forest Service management. Save in a few cases and places, Forest Service has not been forced into the primary business of entertaining the vacationing public, policing the delinquent guests, and succoring the 'tenderfeet.' It admits the public; it assists and cares for it, but it is not obliged to construct so many four-lane concrete graded auto highways. The deer really leap and bound there, and the grizzlies might really show fight, I suppose. My sense of primeval wilderness on Forest Service lands is often greater than in the scenically ravishing parks.

But the big drawback under Forest Service, from the point of view of wildlife conservation, is that every season any licensed hunter has to be admitted. Now, law-abiding chase, properly regulated by rules changed to meet local and seasonal requirements, meets no opposition from me. But two years ago in the Santa Barbara National Forest hunters were horrified to find countless does as well as bucks killed and left as food for Buzzards. Fawns had been slaughtered by men who call themselves sportsmen. Bucks had been peppered with agonizing wounds that maimed them but did not put them out of their suffering. Either a lot of our hunters can't tell a buck from a doe or even a fawn, or else they don't give a tinker's tinkle for the law. As for their marksmanship, they must be cross-eyed tailors by trade. Last fall, if newspaper reports are true, five hundred persons (*persons*, I said, not deer) were shot in the open season. That's more patriots than fell by the rude bridge that arched the flood. When a lot of our doughty Nimrods go to the next war, the enemy is going to thank their pagan gods they are not over in the American trenches.

Both the Park Service and Forest Service do splendid jobs in their respective fields. There is no reason to tear your locks about the ownership of public lands by either of them, as long as private commercial enterprise is not allowed to force through Congress enclaves that steal from the public heritage for personal profit. National Park lands were once considered inviolate in this regard, contrasted with Forest Service lands. But that sanctity has been sapped and mined and betrayed. John Muir fought the Hetch-Hetchy Reservoir in Yosemite, and lost. We all fought the tunnel for irrigation waters in Rocky Mountain National, and lost. We will fight for Yellowstone Park and Kings Canyon.

* * *

It was the custom, for a long time after the death of Linnæus, to go out on his birthday and make a foray in the woods and fields, collecting, in the spirit of affection for flowers and commemoration for the man who named them. I cannot say if any club, college classes, or Linnæan Society still does this, but I do

it faithfully. This year I extended the Linnæan celebration over a whole week, as is the custom with fiestas in Alta California. So I cut a biological profile of the state, from the giant kelp beds and Pelicans at Santa Barbara, over the top of the Tioga Pass at 10,000 feet, with Mountain Bluebirds on the snowbanks, and storm-riven junipers.

Everybody knows that ornithologists are high-souled people who lean over backwards and raise their eyes to heaven in the effort to see the birds. And that botanists are meek, earth-grubbing folk, stoop-shouldered with much searching on the ground; they go through life with downcast eyes. To try to be both at once results in conflict and a split personality, against which psychiatrists warn us. The split in me, however, occurred some years ago when half of a professional botanist tried to become an amateur ornithologist, and I am used to it now. Admittedly I must have missed half in each field when I ran simultaneous avian and phytological transects across California. Still, I find that the notes made on my cuffs at the time, transcribed to thirty typewritten pages. Here they are, in the style of the digest magazines:

Pacific Gulls on the kelp beds, twinkling their wings in the soft brilliance of sunlight at sea. Brown Pelicans gliding with the ungainly solemnity of Pteridactyls, and Farallon Cormorants like a wedge of black Geese. Then the car swings inland, into the Santa Ynez Valley. Yellow-billed Magpies streaking along the sandy river beds. Grand old birds; why is their range steadily shrinking in this state?

Tulare Lake is marked dry on the maps; I found it full of slaty water, though. In the big irrigation ditch leading from it, that is chocked with handsome tules (bulrushes), I saw American Egrets and Great Blue Herons all along the way, immobile as long as the car does not stop. Coots bobbing about, their noses all white, like those of the cold-creamed playboys on the Malibu beaches. Best of all were Black-necked Stilts, mincing daintily on brilliant red legs, knock-kneed but, with their black ties and white shirt fronts and swallow-tailed coats, looking dandified in a ditch-water habitat.

In the Great Central Valley, as soon as you stop the car, the rapture of Western Meadowlarks blows to you from hot grain-fields, and, reminding you of Illinois, the gurgle from the ditches of the Red-wings. Looking up *which* Red-wing in the distributional list of the birds of California, I find that there are six subspecies of *Agelaius phoeniceus*, and I'm blessed if I know which one I saw. Or how different they really are. Gossip is whispering out here that somebody who made more subspecies and subtle varieties of once simple western birds than anybody else, recently decided to undo his life work and reduce all to synonymy.

* * *

Some thirty or forty miles north of Fresno, the earth suddenly rises under the flying car in the first dead swell of the sea of mountains to

come. Another earth wave, and another, and then the forests come marching out of the Sierra Nevada. First maul oak and dusty digger pine, then the great sugar pines, the biggest in the world, then the massive western yellow pine. Then the maples, then the white firs and the red, breathing fragrance to mingle with the fragrance of the Jeffrey pines and incense cedars. Then the hemlocks and Douglas firs and big trees, till the mind is forest-drunk. And abruptly, on emerging from a tunnel, I see Yosemite below me, shafted with the last long light, laced with cataracts spilling from the hanging valleys, walled with cliffs and carpeted with iris and the great frail mariposas.

* * *

I found Yosemite birds extraordinarily difficult to see. Small gray or 'greenery-yallery' Passerines are never easy, when new to you. Imagine them, then, keeping to the tops of a forest canopy a hundred feet high and very dense. Imagine staring at their wee, dark, jumpy silhouettes through this umbrage, a brilliant sky behind it. Black-throated Gray Warblers, Western Warbling Vireos, Western Wood Pewees, Lincoln's Sparrow—I *think* I distinguished them, now in their subtle plumage, again by their slender songs.

Oddly enough, the finest singer that I heard in Yosemite was the Western Robin, whose voice does not differ to my ear from 'home' Robins'. In the East we consider the Robin a familiar and lovable bird with a voice we are glad enough to hear in April, when the lawns are greening, but one quite eclipsed at the height of the May morning bridal chorus. Here, without the competition of Mockers, Thrashers, Catbirds and Orioles, he sings a rôle like our Thrushes'—carrying the matins and evensong with a steady and measured optimism. Set off like this, like a single jewel on black velvet, he really shines.

But what I came so far to hear and see, beside Yosemite trees, was, of course, the Dipper or Water Ouzel. A friendly handsome Missouri boy was detailed to take me to an Ouzel's nest, and we had hardly quit the highway for the banks of a rushing stream before I saw it, looking like a dome of moss accidentally washed to a wedged position on a great boulder in midstream. The entrance, uniquely, is at the bottom, and into this aperture suddenly a stumpy-tailed bird of the same color as the rocks fluttered up, thrusting the caddis-fly nymph in his bill into some invisible mouth within. Then he backed down, turned around, surveyed us, ten feet away, with a friendly eye, genuflected, curtsied, becked his head, and flew into and under the glass-green water. We watched him a full hour there, and his mate too, at their prettily executed duties, and I must say they are all that Muir ever wrote of them—the neatest, sweetest, busiest and friendliest birds in the West. Nobody molests them, everybody loves them, and by the look of things they are on that rare and happy list of beautiful and valuable birds that are holding their own, or better.

Willets on the Air

By **Albert Dixon Simmons**

With Photographs by the Author

SINCE 1916, when a few pairs of Eastern Willets were found nesting in Nova Scotia, these interesting shore birds have gradually repopulated their northern domain. Timely protection has restored to the salt marshes of that "stern and rock-bound coast" one of the loveliest of nature's tone dramas, the voice of the Willet. A fine voice it is, with a wonderful balance of passion and inexorable logic, flung forth with instinctive and unblemished sincerity for all to enjoy. The ringing *pill-will-willet* and *Willet* calls, from which the bird presumably takes its vernacular name, carry across the marshes with amazing clarity and after years of summering there, I've begun to look upon these calls as a greeting and a Willet challenge to interpret their vocabulary.

Sentinels of the Marsh

Unfortunately, my visits to Nova Scotia are confined to the month of July, when the young have already been led—often across the paved roads and railroad tracks—from their nesting areas in the fields, to the marshes. There the lookouts, perched on the tops of spruce trees, granite boulders, and telephone poles by the roadside, spot the intruder from afar and the alarm note is sounded. A Willet chorus has begun that will arouse the whole neighborhood and end only when the trespasser leaves or hides. The wonder of it all is how the Willet's vocal cords can take it without missing a beat, or when the bird draws breath.

Hide-and-Seek

Early in my experiences with Willets, I noticed that as soon as I walked behind a boulder or tree, the clatter subsided somewhat and the birds came looking for me. I had started a game of hide-and-seek which I later turned to good photographic advantage. I might call it the 'hide' maneuver because it applies to the period when the young are abroad.

Equipment

Under such a heading, this issue of BIRD-LORE and many others could be filled and it is not my intention to make either an inventory of a camera store or open the never-ending discussion of what camera is best in the field. This has all been elaborated *ad nauseam*. I will say, however, that I fail to see the alleged advantages of packing heavy equipment on all-day tramps. I, like most people, prefer to go as light as possible, and my choice is a miniature Precision camera that will perform successfully over a wide range of activities. I say precision advisedly.

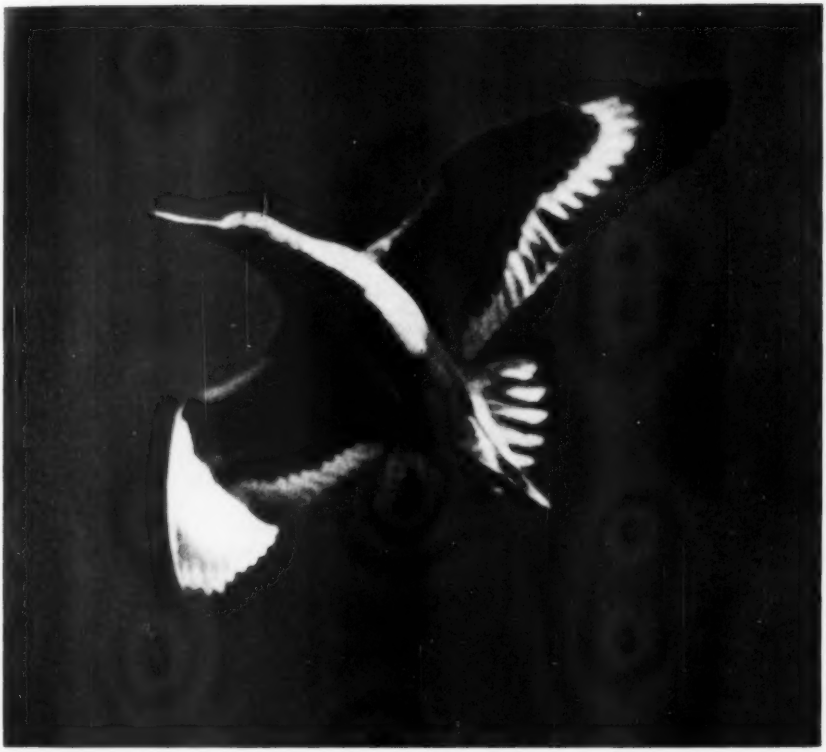
As for flight patterns themselves, it has always seemed to me that there was a definite need for the accurate portrayal of birds in flight. Wing positions, how and where the feet are held, activity of the tail, and positions of the head and neck, are all variable factors, moving too fast for the eye to register them in their proper relative positions. In spite of this, draughtsmen have rendered what they cannot see with the result that our bird books are filled with inaccurate drawings of birds in flight, and museums hung with warped specimens on the wing. As long as the study of birds is on a highly scientific basis, why not leave surrealism to its dream realm? Aside from all this, I consider wing shooting with a camera one of the most exciting of sports and my only wish is that a few hundred thousand gunners would try it, and if they did, they would find that gunning was mere child's play.

Technique

All one can do in attempting to write a short chapter on flight photography is to try to outline briefly the steps followed in making these particular pictures, and I have already outlined one of the most important items—that of first studying the flight behavior of the subjects.

Photographically speaking, birds are very small objects. It is one thing to fill a negative with say, a polo pony, but to fill it with an object the size of the pony's ear is a matter that requires careful stalking when the object happens to be a bird on the alert. So our next step is to get close to our subjects if we are to get pictures of birds and not just pictures with birds in them. As an example, the picture of the young Willet in the marsh was taken at a range of 5 feet using a telephoto lens of 2.7 power and the reproduction represents not more than half of the negative. Such a shot is a studio setup when compared with the fugitive parents overhead. I played the hide-and-seek game in a small clump of spruces in the marsh where the trees were not more than 10 feet high. As the birds came looking for me, they just cleared the tops of the trees and often alighted. I first determined the distances from my station to the tops of the surrounding trees by using the built-in distance meter of the camera, and was thus able to set my lens as the birds were alighting or flying over the known ranges. The shooting ranges were from 12 to 20 feet. Since the depth of focus of the lens (135 mm.) at stop f6.3 is 2 feet and 10 inches at a range of 20 feet and a bare 12 inches at 12 feet, careful timing and good judgment must be used to get the bird in focus.

The principal problem is to get the birds in the picture area and this I have solved from gunning experience. I have already pointed out that the image of a bird the size of a Willet is a small one, so it becomes a matter of merely centering the bird. For many, the open viewfinders used by newsmen will be found satisfactory, but I have used a set of pistol sights with a wide 'V' in the rear and bead sight in front. These are mounted on the camera in such



FEATHER CONTROLS

play their part when a change in course is the order.

a way that they point to the dead center of the picture area. The flying bird is followed on the sights, thus arresting the forward motion, and wing motion can be stopped at shutter speeds of from 1/200 to 1/500 second. For slow wingers, such as Gannets, Cranes, and Herons, an exposure of 1/200 second will give excellent renderings, while the Duck tribe, using seven or more wing beats per second, require 1/500 second.

Exposure and Equipment Data

All photographs were made with a Leica camera equipped with a 135 mm. lens (2.7 power) at aperture f6.3. Film used was Agfa superpan supreme. Flight pictures were made at 1/500 second and the sitting bird at 1/100 second.

MOVING RHYTHMIC BEAUTY

is intensified when a Willet spreads its wings. The basal half of the primary and the greater part of the secondary flight feathers are white but invisible when the bird is at rest.

"WILL-ET, WILL-ET, WILL-ET"

is a tone-drama of the marsh, a fortissimo warning to trespassers.

THE LOOKOUTS

use the spruce trees that meet the salt marshes of the Nova Scotia coast.

A YOUNG WILLET

hides in the salt marsh while I play
hide-and-seek with its parents.

Mt. Johnson Island Eagle Sanctuary

By **Herbert H. Beck**

MT. JOHNSON ISLAND is a sharply inclined freak of geological erosion rising like a dromedary's hump from the Susquehanna River, which is impounded into a lake about it by the Conowingo dam 8¼ miles below. Its 21 acres are ridged along the top by nearly vertical and frequently protruding cleavage planes of Pre-Cambrian chlorite shist. Within Drumore Township, Lancaster County, Pa., it is 3½ miles north of the Mason and Dixon's line.

The island from without is the scenic gem of a county famed for its varied beauty; within it is a fairyland of unspoiled wilderness. Dominated by tall red oak, white ash and tulip poplar, entangled by fallen trunks and dense low growth, it is as it must have been known to the Susquehannock Indians, the racial giants whom John Smith met in 1608 farther down the river. In fact, some of the trees on the island are old enough to have been associates of the Susquehannocks before these Indians were exterminated as a nation by the Onondagas and Cayugas of the Iroquois Confederacy in 1675.

Doubtless for many centuries this island has had its aerie of the Bald Eagle. With its insulation and altitude there is nothing to equal it as an aquiline strategic point along the far reaches of a river that has been the natural home of the Bald Eagle since its existence as a species, for the river is much older than the bird.

In June, 1935, the writer took Richard H. Pough and Roger T. Peterson, of the Audubon Association, and Arthur C. Emlen, President of the Delaware Valley Ornithological Club, to the island. One Eaglet could be seen on the side of the nest, which was on a dead red oak 6 feet above the highest ground on the island. Recognizing the conservation possibilities of the place, Mr. Pough got in touch with the Philadelphia Electric Company and by 1936 a lease had been drawn between that corporation and the National Association of Audubon Societies making Mt. Johnson Island a sanctuary, essentially for the Bald Eagle. It was the first sanctuary for that bird, and probably for any other Eagle, in the world. At that time Mr. Pough knew of but three other nests of the Bald Eagle in Pennsylvania, they along Lake Erie.

In 1936 two Eagles were raised on the nest. In 1937 it blew down, breaking the wing of its one Eaglet. With the permission of the State Game Commission, for the Bald Eagle is protected in Pennsylvania,

Photo by Edward A. Hill

Mt. Johnson Island

Edward A. Hill set up an emergency hospital for the two-thirds grown Eaglet and tried in vain to save its life. In 1938, after three Eaglets had reached soaring size, the nest fell again. During this nesting period, excellent set and moving pictures of the three young, in different stages of growth, were taken by Ed Hill from a stout ash tree, which made possible camera views at 18 feet.

In 1939 the Eagles seemed to sense the insecurity of the fork from which their nest had fallen twice and selected a huge living red oak, about 25 yards from the dead tree, where their new nest is now firmly placed, 85 feet from the ground, and where their two young were reared. The eggs are usually laid between February 15 and 25. This year, possibly because a nest had to be built, they were about a month later.

The surroundings of the present nest, which seems destined to hold its position for many years, do not favor photography as did the one of 1938. However, the Eaglets on this strong tree can be banded, as they were this spring by Fred Schmid and John Gillespie. This could not safely be done on the other tree with its nest on a decaying fork.

Among the summer resident companions of the Bald Eagle on the island are: the Great Horned Owl, which occupies a cavity in a tall dead tree 150 yards from the aerie; Cardinal, Indigo Bunting, Scarlet Tanager, Tufted Titmouse, Carolina Chickadee, Carolina Wren, Red-eyed and Yellow-throated Vireos. Making a special study of the relative abundance of eight Warblers there in mid-June of this year, Clifford Marburger and the writer found them in this order: Redstart, Cerulean, Northern Parula, Worm-eating, Black and White, Kentucky, Louisiana Water-Thrush and Yellow-breasted Chat, the first four being particularly common. There are no Thrushes. Of several Woodpeckers, the Red-bellied, seen in

April, may breed there. The Wood Duck is likewise a possible breeder, as a young bird was seen there in mid-June. In migrating seasons many kinds of Ducks, Canada Geese and Whistling Swans pass by, mainly to and from the Susquehanna Flats, 18 miles to the south.*

The sanctuary is a treasure island for botanists. Essentially in the Upper Austral Zone, as is its bird life, it contains some northern plants, like the striped maple that was apparently transported by river current, and several, like the prickly pear cactus, far away from their typical habitats.

With its washed, rocky banks rising sheer from the water, Mt. Johnson Island is difficult of access. This fact, with its isolation and the local tradition that it is infested with copperheads, makes it rarely visited. Roy Smith, of Drumore Post Office, a mile and a quarter up the river, is the warden of the sanctuary. He is ready to take naturalists to the island and show them the easiest approach, which is along the south end. It is well worth the two-dollar fee to have his guidance. Furthermore, Smith and his wife take pride in their Eagles, as do many more of the neighborhood, like Joseph Cutler from whose porch there is a glorious view of Mt. Johnson Island.

With its protection properly enforced, as it is in Pennsylvania, the national bird is fairly safe there. To prevent its being shot in an act of depredation, which may be legally done with affidavit, the Lancaster County Bird Club has spread into the local papers its willingness to compensate farmers for losses rather than have them kill an Eagle that invades their barnyards.

Photo by Edward A. Hill

Dr. Beck holding two Eaglets from Mt. Johnson Island

Alas, the Eagles of beautiful Mt. Johnson have only to make a short flight to be in Maryland, where no protection is offered them. When will the state of the Baltimore Oriole learn that the loss of a few of its prized Ducks, and these mostly cripples from the big guns or automatics at night, could well be overlooked in a national effort to save the emblem of the United States from the impending extinction that the Audubon Association and the Biological Survey are trying to prevent?

*The Susquehanna Flats, famous in the lore of wildfowling, are a Vallisneria-covered shallow of about 80 square miles at the head of Chesapeake Bay. About half of the Flats will become a Biological Survey Refuge during the fall of 1939. This will be used mainly by Canvas-backs and Scaups, the former in particular, much in need of protection.

Swamps and Marshes

By **Roger T. Peterson**

WHERE the river makes its big bend, through the flat country north of town, there is quite a marsh. They say it was a lot more extensive before the water was drained off, some of it to make onion fields. The Junior Audubon Club was glad that some of it still remained, for it was by all odds the best spot for birds and other wildlife they knew. There was talk from time to time of draining the rest of the marsh. Some people said it was an eyesore, others that it bred mosquitoes. The members of the Junior Club could not share the view that it was an eyesore; to them it was a beautiful place, especially in the early morning when the rising sun dispersed the thin mists from the sparkling reeds and grasses. As for mosquitoes, well, the puddles around the farms and in the vacant lots around town bred just as many. It would be better to clean those up.

To think of losing the river marsh was an unpleasant thought, yet it was always a possibility. Where would the Red-wings go, and the Bitterns and the Rails? They would probably try to find other marshes, but wouldn't those marshes already have as many bird inhabitants as they could take care of? That was something to think about, something to discuss at the next club meeting.

What Is a Swamp?—A Marsh?

The teacher started with a question: "What is the difference between a swamp and a marsh?" Some of the students were quite certain they were the same thing, any low piece of muddy ground, saturated or partly covered with water. One boy said he thought a marsh was usually more open than a swamp. He was on the right track, the teacher said, but she suggested that he go to the large dictionary and see what definitions were given. Under 'swamp' he found a lengthy discussion to the effect that it was wet, spongy land; so was a marsh for that matter, but further along, under the heading 'specific ecology,' it stated that it was a piece of such land "*dominated by trees and shrubs.*" A marsh, on the other hand, was wet *treeless* land, characterized by cattails and grasses. The class put these definitions in their notebooks:

Swamp—a wet *wooded* area
Marsh—a wet *treeless* area

"There are two very different kinds of marshes," the teacher reminded them, "those along the seacoast that are flushed by the

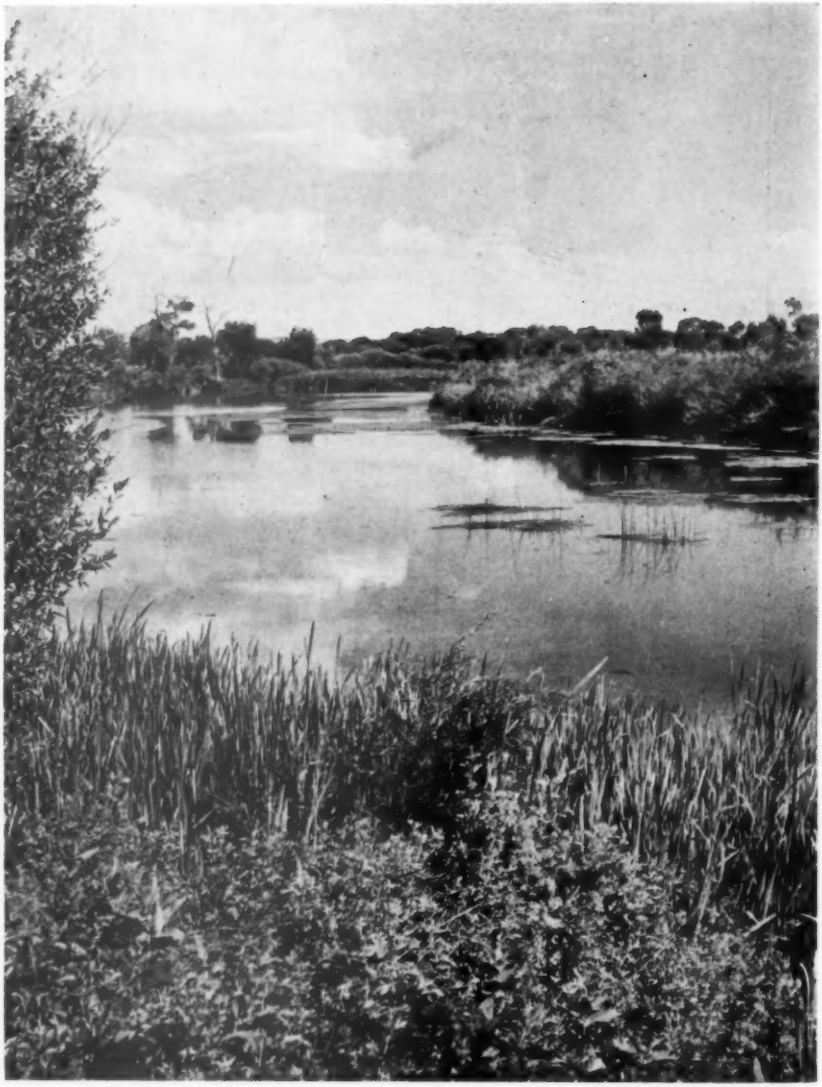


Photo by Soil Conservation Service

A good wet marsh is a bird-lover's idea of heaven

tide, the salt marshes, and the ones that are fed by fresh water, the fresh-water marshes. The bird, animal and plant life in these two types are quite different."

The Water Table

The class already knew something about the value of swamps and marshes to the land for not long ago they had been studying water

(see 'Water—Life-Blood of the Earth,' BIRD-LORE, Nov.-Dec., 1938). The teacher asked whether anyone remembered what the *water table* was. Most of the hands flew up immediately. Some of the rain and snow that falls on the earth sinks into the ground. It sinks down into the sub-soil and porous rocks where it forms a sort of underground reservoir where water is stored. The upper level of this is called the *water table*. This underground water finds its way eventually to plant roots or comes to the surface as bubbling springs, or flows into pools or lakes in the hollows. Often where it comes to the surface there are swamps and marshes. The heavy vegetation holds the water there, where it acts as a feeder and a stabilizer to the underground water supply or to near-by streams. In flood times, marshes and swamps are very helpful. When too much water arrives at the same place at the same time, floods occur. Marshes and swamps do their bit in preventing this. The waters gather in the low wet pockets and are slowed up by the heavy spongy vegetation. If there were more marshes, many floods would not be so disastrous.

Swamps, Marshes and Wildlife

When a bird student looks for Warblers in the spring, he goes to his favorite wooded swamp. . . some piece of wooded land along a creek bottom. There the Warbler hordes are most abundant. More different kinds of birds can be seen in a day in a swamp than in any other type of habitat. As for marshes, a good wet marsh is a bird-lover's idea of heaven. There is nothing he enjoys more than slopping around such a marsh in his rubber boots. There are Rails, Marsh Wrens, Bitterns, Gallinules, Coots, Ducks, and many other birds. The botanist finds the rich vegetation of the low country always exciting. There are new things to be found, no matter how long he searches. The hunter, the trapper, and the fisherman would hate to see the marshes and swamps go, for it would mean the end of much of their recreation.

The teacher asserted that as a home for wildlife, and as a stabilizer of water, the value of swamps and marshes runs into many millions of dollars each year. This seemed like a very strong statement, but there are some people who claim that the value is actually many ***hundreds of millions***. The teacher was being conservative. It is very hard to put an accurate price tag on natural resources.

Marshes Are Going. . . Going

It is said that every day plans are being made somewhere in this country to drain a lake, swamp or a marsh. This cannot go on forever, for there will soon be no swamps or marshes left. The records show that between 80,000,000 and 100-000,000 acres of land have been drained in the United States for agriculture alone. This means that millions of acres of water have been hurried off the land, hurried to the sea before their time, before they have been of enough use to plants, beasts, birds, or man.

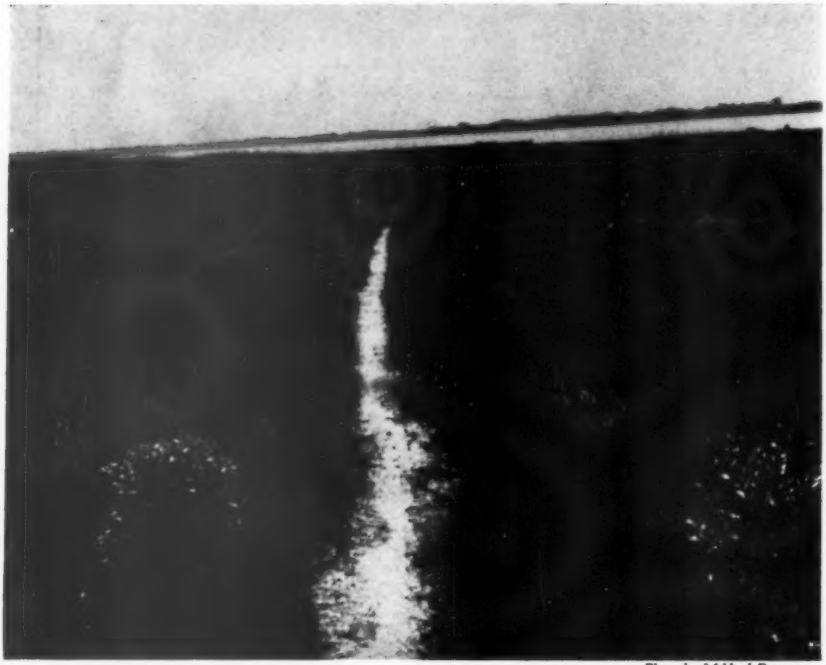


Photo by Mildred Peterson

Millions of acres have been drained

Why Is Drainage Done?

Some people like the countryside to look neat and tidy like a city park or an estate. They think swamps are ugly. They itch to do something about them; to have them cleaned up. . . if for no other reason than to get rid of them. These are the people who dislike to get their feet wet, who prefer to see the country from a sedan.

Marshes and swamps are also drained for more practical reasons. Millions of acres are drained so as to make more land for farming. Other millions of acres are drained with the intention of controlling mosquitoes. These last two things seem worthy enough, but are they always?

Does Agricultural Drainage Always Accomplish Its Purpose?

Oftentimes, when a piece of land has been drained, the rich black soil is excellent for farming but this is not always the case. Millions of acres that have been drained have been without benefit to agriculture at all. The soil was not good or it had too much of an alkali content; or, in the case of many shallow lakes that have been drained, they have turned into peat bogs which are quite useless. Then, too, even if the soil is good for farming, sometimes the water table drops so low that the plants have difficulty in picking up the water from the soil. There is a limit to which roots can penetrate.

And Mosquitoes?

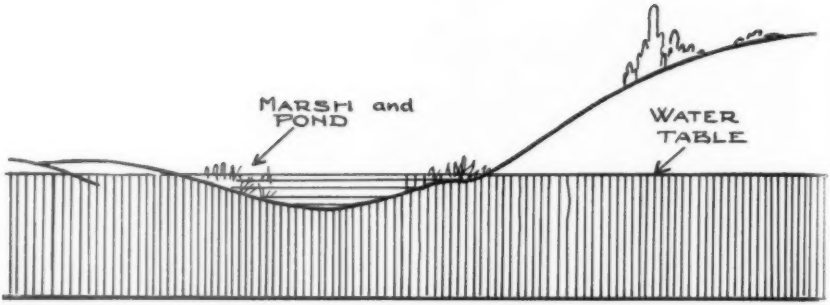
In similar manner, mosquito control does not always eliminate mosquitoes. It undoubtedly does in many cases but many swamps, marshes and lakes are drained simply because they look like places that would breed mosquitoes, even though perhaps they have no mosquitoes at all.

Malaria, which is carried by mosquitoes, is a menace, but millions of dollars have been appropriated for malaria control in states and communities where malaria does not exist. This is all very stupid; not only is the money spent uselessly but there is an even greater financial loss through the destruction of wildlife and the lowering of the water table. It is a double-headed loss.

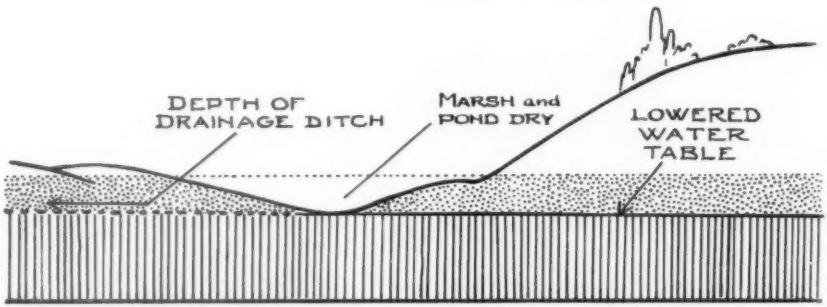
What Does Drainage Do to the Water Table?

"If a marsh is drained," the teacher asked, "why should that lower the water table?" No one was quite able to answer this. Offhand they did not see how the draining of the swamp could affect anything but the swamp. The teacher then reminded them that the swamps and marshes are where the general water table reaches the surface of the ground, where the land is low enough so that the water seeping out collects in the pockets. To illustrate this she drew a diagram on the blackboard:

What happens to the marsh birds when a marsh is drained?
Photo by Allan D. Cruickshank



If long ditches were cut from this marsh to the nearest stream so that the water would run out, this is what would happen:



As the water ran out of the ditch more water would feed into the marsh from the underground storehouse. This would run out of the ditch, too, until not only the marsh was dry but the underground water had become so low that it could no longer feed the marsh.

The teacher went on to say that in some prairie regions of the United States it is said that the underground water table has been lowered fifty feet or more in the last thirty years. "What would that mean if a farmer were to dig a well on a farm for water?" she asked. One of the boys replied that it would mean he would have to dig over fifty feet further down if he were going to find any water. When the water table becomes so very low as all this, it does not do much good to the plants that live on the surface. They can no longer pick up the moisture readily, and they become sickly and dry up.

Streams that seep out from the swamps or that are fed by the moisture from wet lands become very low or disappear when the swamps and marshes are destroyed. No longer can people go canoeing, fishing, or swimming when the stream waters get too low.

In many places ponds and even lakes have gone down or have just disappeared because the low swamplands around were drained. Sometimes the drained swamplands become so dry that long, smoldering fires start. One of the boys remarked that "this is what is happening in Florida now." He had read in the papers that fires were raging in the Everglades because everything was dried out. The feeding grounds of the Herons and Ibises were going up in smoke. Much of the Everglades had been drained for farming, but it did little good, for even the black soil itself was burning up.

It was not a nice picture to think that some day all the marshes might be gone. If such a day came, man might find his water supply getting low and his crops failing. Swamps help hold the world together just as do streams and rivers.

Drainage and Wildlife

The teacher suggested that everyone in class try to go the rest of the day without taking a drink of water. She said no one had to do this if he did not want to, but most everyone joined in the experiment anyway. It was not long before some of the students would have welcomed a long cool glass of water or a few mouthfuls from the bubbling fountain out in the hall. The teacher asked what would happen if the water supply of the town were cut off and no one could get a drink anywhere? First there would be some inconvenience; people would begin to get thirsty, then excited and panicky when they saw things were serious. There would be disease, death from thirst, and a horrible situation in general.

Wildlife needs water just as much as we do. The teacher returned to the question "What happens to the marsh birds when a marsh is drained? Where do the Red-wings go and the Bitterns and the Rails?" It is quite certain they would leave for they cannot get along without the plants among which they find their food and which give them safety. When a marsh is drained, other plants come in, but not the ones among which Bitterns and Rails can find their living. They have to go somewhere. If they find another marsh, doesn't that take care of it? It would seem so, but it does not. Nearly every habitat carries its full bird population. If too many birds try to live there, nearly all of them will suffer. A marsh will only support so many. So then when a marsh is drained, the ten Marsh Wrens, five Bitterns and five Rails that lived there are eliminated just as surely as though they had been systematically shot off—a little more indirectly perhaps, but just as surely. "*A habitat is like a house*," the teacher explained. "*If a family dies, another family can move in; but if the house burns down, no one can live there.*"

Waterfowl are much less abundant today than they were a generation ago. The breeding grounds are greatly reduced. The few Ducks that do try to nest in ditched marshes have a hard time. Food is meager and the ditches are a trap for the babies; the sides are so

steep they cannot climb out. Occasional fires that sweep the dry marshes burn the eggs and fledglings. In some marshes where the water has become too low, waterfowl sometimes fall prey to diseases like 'Duck sickness.' Then, too, hunters with automobiles can get to the few remaining good spots much more easily than they could years ago. It is not an encouraging picture for the Ducks. The Federal government is creating a large number of refuges but this only solves part of the problem.

Malheur Lake, in southern Oregon, one of the greatest nesting places for waterfowl on the continent, was drained a few years ago. The homes of myriads of birds were destroyed. The lake became a worthless desert, useless for both farming and for birds. Fortunately, after this costly mistake the waters have again been turned into Malheur and the birds are returning. But the money squandered is gone forever.

What To Do?

The drainage of marshes still goes on, but now there is also some money being spent to restore swamps. In some places the water table is being raised and marshes are becoming healthy again. The fires are dying out and the birds are beginning to nest as they formerly did. Even the surrounding fields and woodlands are becoming healthier.

There will probably continue to be a certain amount of drainage and mosquito control. But there should be a careful study of each marsh before it is drained. If drainage is shown to be necessary, the methods used should be such that the destruction to wildlife will be minimized.

In the case of mosquito control, there are practical methods which do not require ditching the marsh and letting the water out. There are small fish and other natural enemies that will eat the mosquito larvæ. The water areas can be enlarged with ponds so that the constant movement of water will destroy the mosquito wigglers. There are volatile poisons, such as pyrethrum, which are not harmful to wildlife, but which destroy the mosquitoes. It is possible to control mosquitoes and still have the marshes healthy enough for the breeding of wild Ducks and other marsh birds. Marshes in which there are no mosquitoes should not be tampered with.

The class knew a great deal more about marshes now, and they could not help thinking how much better everything would be if man would try to understand and adjust himself to nature instead of constantly fighting it.

This is the fourth of a series of articles designed for the teacher who wishes practical methods of teaching nature study and conservation in line with some of the more modern concepts. The previous articles are 'How Should Nature Be Taught?,' 'Soil—How Wildlife Depends Upon It,' and 'Water—Life-Blood of the Earth' ('Nature Study for Schools,' Parts VIII, IX, and X).

Canadian Conservation Problems

By J. R. Dymond

PART II

One of the biggest conservation problems in Canada today is to bring about the adoption of a forest policy that will insure adequate timber and other forest products on a sustained-yield basis, at the same time taking care of the other functions of a forest, namely as a home for wildlife, as a regulator of stream flow, and as a place for recreation. The adoption of such a policy is especially important in Canada because of the large area in our country unsuitable for agriculture. Over half the area of the country is comprised within the Canadian shield, also called Laurentian plateau, a vast area of crystalline Pre-Cambrian rocks. This exposed part of the ancient core of North America is rugged and exceedingly rocky country. In most places, the soil over these rocks is very thin and lies chiefly in the depression between the numerous hills, which are often bare rock. Water, collected in the hollows, forms lakes of every size from mere ponds to extensive lakes. Their numbers run into the hundreds of thousands. The arctic and subarctic portions of the Canadian shield do not support tree growth but elsewhere this area is suited to forest production.

This immense area, unsuited in the main to agriculture, should be managed so as to produce a continuous crop of trees and of wildlife, and to provide facilities for outdoor recreation. The time has passed when our forests should be managed solely from the point of view of timber production. Unfortunately, the potentialities of our forest lands are far from being realized. We have handled our timber wealth so wastefully that we are coming well within sight of the end. As active competitors in the lumber markets of the world, some prophesy that, at the present rate of consumption and destruction, Douglas fir will be out of the picture in fifteen years and white pine in thirty. The statement was recently made that many pulp and paper men today admit that ten years hence they will definitely be worried about their sources of wood supply. Our losses from forest fires continue to be very large; the average area burned annually for the ten years 1926–35 was 3000 square miles for the whole of Canada. In 1936 it was more than 4500 square miles, Ontario alone accounting for 2000 square miles. These fires not only destroy the present crop of timber,

Photo by Canadian National Parks

The moose is steadily retreating before the advance of settlement

but in many areas make tree growth impossible for hundreds of years through the destruction of the humus content of the thin layer of soil covering the rocks. Following fires, the exposed soil is washed into the streams and lakes, not only leaving the rocks barren so far as the production of trees is concerned, but injuring fish life in the waters. The enormous tracts of almost bare rock to be found in many parts of Canada are evidence of the washing or blowing away of soil which took thousands of years to form and which once bore a forest of permanent revenue-producing possibilities. On the maintenance of forest cover also depends the preservation of animal life that finds its home in the forest and, to a considerable extent, the preservation of conditions necessary for fish life in the lakes and streams.

The existence of so many lakes on the Canadian shield, which is largely non-agricultural land, suggests at first sight that there should be no difficulty in maintaining our Duck populations even if the prairie lakes dry up as a result of agricultural development. Unfortunately, most species of prairie-nesting Ducks do not nest on the Canadian shield. The only two Ducks nesting in the Laurentian area of Ontario that appeal to the sportsmen are the Black Duck and Golden-eye. There is, however, some evidence that the Ring-necked Duck is moving east. The Blue-winged Teal has recently shown quite a notable comeback with us.

We have been equally prodigal in the destruction of our animal life. Several species have been so seriously reduced in numbers that their continued existence is threatened. Elton believes that the marten has already been eliminated as a commercial fur bearer and that its total extinction is to be feared. While the moose is in no immediate danger of extermination, its future is by no means secure. It is steadily retreating before the advance of settlement. The decrease in its numbers has been so marked that no hunting of it is permitted in Nova Scotia or New Brunswick and in large areas of Ontario. The history of the moose suggests that it moves from one large area to another through periods extending over many years. It has been stated that, in the Gaspé peninsula, the interval between its leaving and returning was upward of half a century, and that in other regions the period between its withdrawal and reappearance has been still longer. The areas to which the moose can return, if it leaves them, are rapidly decreasing. The gratifying increase in the numbers of moose in Algonquin Park in recent years is no guaranty of their permanence in this area. Should they in the future leave this area, they would almost certainly perish before they found safety anywhere else. We need many more sanctuaries if we are to guarantee their continued existence.

The beaver is in no danger of extinction but, in common with most of the fur bearers, it has been trapped to commercial extinction, over most of its range, so that there is no open season at present in Alberta, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, or Prince Edward Island.

The zone system of trapping has been suggested as a means of combatting the tendency of trappers to trap the animals to extinction. Under this system, each trapper has a certain territory over which he has the sole trapping rights, for which he pays a yearly rental and on which he has the powers of a game warden so that he may protect it against other trappers. This system encourages the trapper to maintain the population of fur-bearing animals at the optimum. Where everyone has the right to trap over an area, there is no inducement for anyone to leave any animals. If he doesn't take them, someone else will. It should be our aim to have wildlife as well as forests managed on a sustained-yield basis.

I do not wish to leave the impression that wildlife in Canada is on the verge of extinction. Canada still possesses the major part of the remnant of wildlife with which this continent was originally blest. The point I wish to make is that, if present trends continue, our wildlife will within a relatively short time be in a dangerous position.

Pollution is another conservation problem in Canada. In southern Ontario, hundreds of factories and industrial plants of various kinds pour their waste materials into streams and lakes. Across northern Canada, pulp mills and mines dispose of their wastes in the same way. Most of this material is injurious to fish and other aquatic life. Manufacturers point out that treatment of their wastes, or disposal of them in ways which will not injure the life of lakes and streams, will add to the cost of their product and put them at a disadvantage in competition with similar products from other countries. Pollution, therefore, is a problem that calls for parallel action in different countries, especially by the United States and Canada.

We have a problem, too, in the conservation of our fisheries, both game and commercial. Depletion of fish life in the more accessible parts of the country is already painfully evident. It is true we have thousands of lakes and streams that have scarcely been fished at all, but we cannot for long depend on maintaining good fishing by moving on to fresh waters. That is too much like mining the waters. The fisheries, in common with the forests, the wildlife and all other renewable natural resources, must be placed on a sustained-yield basis. The time when we can continue to mine these resources is almost at an end.

The commercial fisheries of Lake Erie, naturally one of the most productive of the Great Lakes, formerly yielded a rich harvest of whitefish, lake herring, yellow pickerel, and a great variety of other species. Through overfishing, its annual yield has been reduced to a small fraction of its former production. Careful studies by Dr. Van Oosten of the United States Bureau of Fisheries convince him that Lake Erie would again produce greatly increased crops of fish if the breeding stock of fish were allowed to build itself up. Under present conditions of management, or mismanagement, the lake is like a productive farm that is stocked with only one-tenth the animals it can support. One of the difficulties in the management of the fisheries of Lake Erie is that five owners must agree on the management policy, namely the states of New York, Pennsylvania, Ohio, and Michigan and the province of Ontario. It has been impossible to date to get these five governments to agree on a management policy based on the results of careful studies.

The Lake Erie situation has led to the suggestion that the management of such natural resources should be vested in the Federal governments rather than in state and provincial governments. It is believed that the Federal government is less open to influence by local interests, more careful of

Photo by Ontario Dept. of Lands and Forests

Losses from forest fires continue to be very large

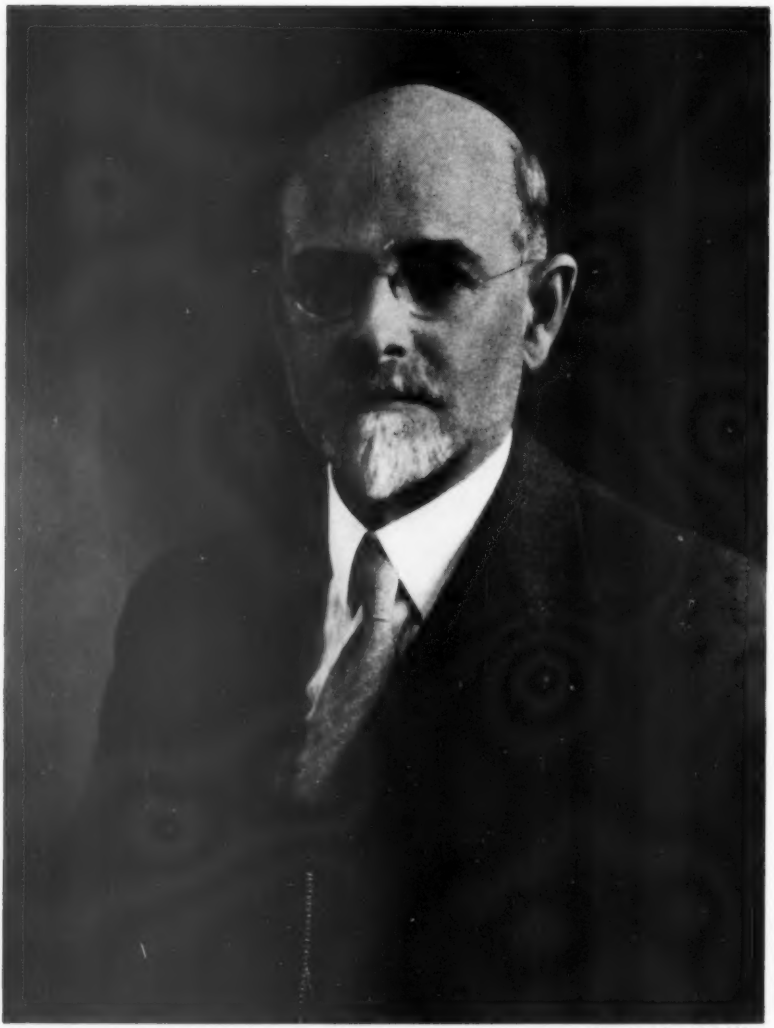
the general good than are local governments, each jealous of the interests of its own locality.

Those of us who believe in democracy believe that the only permanent solution of our conservation problems lies in public education. Conservation measures obtained by some sort of political maneuvering, unless backed up by the will of the people, will not be permanent. Even the Audubon sanctuaries, although permanently endowed, are not safe unless it is the popular wish that they be respected.

There is something else needed, too—research. The discovery of proper methods of control of nature is not easy. Harm, instead of good, has often resulted from well-intentioned measures based on insufficient information. An oft-repeated story to illustrate the point we owe to Sir Arthur Thomson. He wrote:

> There is an Australian story which reads as if written for man's instruction. On certain Murray River Swamps, several species of Cormorants used to swarm in thousands, but ruthless massacres, based on the supposition that the Cormorants were spoiling the fishing, reduced them to hundreds. But the fishing did not improve; it grew worse. It was then discovered that the Cormorants fed largely on crabs, eels, and some other creatures which devour the spawn and fry of desirable fishes. Thus the ignorant massacre of the Cormorants made for the impoverishment, not for the improvement, of the fishing. The obvious moral is that man should get at the facts of the web of life before, not after, he has recourse to drastic measures of interference.

Research and education are the two forces which must be employed in the fight for conservation.



Joseph Grinnell

Photo by Sidney V. Webb

JOSEPH GRINNELL

DR. JOSEPH GRINNELL did his own thinking and loved his work with passion. If ever a star were set in its course, it was the career of Joseph Grinnell.

The name was originally De-Grenelle and the family is of Huguenot descent. Both grandfathers were Quaker ministers in New England. He was born in Old Fort Sill, Okla., February 27, 1877, but spent the greater part of his life in California, where he died at Berkeley, May 29, 1939.

He graduated from the Pasadena High School in 1893, received his A.B. degree at Throop Polytechnic Institute in 1897, his A.M. in 1901 at Leland Stanford Junior University, and Ph.D. in zoölogy there in 1913. Although from 1897 on he filled many positions, with many titles, most of us knew him best as the Director, since its founding in 1908, of the Museum of Vertebrate Zoölogy at the University of California in Berkeley, with the ranking of full professor from 1920.

Joseph Grinnell originated a new school of thought, when he maintained that there was more than enough scientific information of outstanding value to be obtained within the confines of the state of California to enlist the undivided attention of many scientists throughout their entire lives. That he practiced what he preached is abundantly manifested by the record of the expeditions in which he participated.

He belonged to thirty-nine organizations, including the Cooper Ornithological Club from 1894, he having been a member of its Board of Governors from inception and from 1938 the president of the Board. From 1902 to 1905 he was business manager of *The Condor;* its associate editor from 1903 to 1905, and its editor from 1906 on. He was a charter member of the American Society of Mammalogists and its president in 1937–38. He was a member of the American Ornithologists' Union from 1894, a fellow from 1901, a member of its council from 1914, and president in 1929–32. He was from 1935 California representative on the Advisory Board of the National Association of Audubon Societies and had evinced deep interest in its conservation program. He planned and saw launched, under his supervision, the Audubon Research Fellowship project for the benefit of the California Condor.

His contributions to scientific literature are too numerous to mention here. There is therein every evidence of the thoroughness of his work and the fact that his day-by-day production in the recording of information and the expression of philosophical opinion was extraordinary.

His admiring students, by the hundreds, are engaged in teaching, research, and land and wildlife administration throughout the United States. In them, their problems, and their success, Joseph Grinnell maintained intense interest right up to the end.

The Director Reports to You

NOW, as summer ripens, silence falls behind the leaves; this is the time of molt, of last broods leaving the nest. Already the Purple Martins are gathering together for their southern migration, and the shore birds, back from their brief nesting season in the arctic, are visiting the warm shallows of our latitudes, thoughtfully turning things over along the tide line. This is the moment when our birds have not so much to say for themselves.

But those who speak and act for them in the name of the National Association of Audubon Societies are sending in a constant flood of reports to the desk of the Executive Director. Texas news is triumphant. Association activities have hung up a record of their greatest year there, with more sanctuaries than ever before, and more birds in some of the sanctuaries. Your Director surveyed the field as far south as South Bird Island in Laguna Madre, and Robert P. Allen covered the entire route to the Rio Grande and doubled back, with an eye out for new colonies.

In Galveston Bay, Texas, your Director visited the Vingt'un Islands Sanctuary, representing the Association as host to members of the Houston Outdoor Nature Club, the Houston Garden Club, and the River Oaks Garden Club. Spoonbills arose on sunset-pink wings, Egrets displayed their nuptial plumes, and Louisiana Herons, White and White-faced Glossy Ibises plentifully showed how successful was this year's nesting season.

Reports are equally happy from sanctuaries all the way down the Texas coast, and it is to be hoped that more members of the Audubon Society may come to glory in the spectacle of these tinted wings in marvelous concentration.

When John James Audubon himself took the field, on his one Texas venture, the glow of Roseate Spoonbill wings was vivid along the coast. Ravaged by plume hunters, it faded out, to reappear faintly in 1923. It's brighter now than at any time since, with three flourishing colonies under guard of Audubon wardens, and breeding adults, by actual nest count, to the number of 794. This figure stands for a climb from zero, in less than twenty years, with the steepest grade made in the past six years of concentrated warden protection.

The Spoonbills had their wardens worried for a while when the pink wings vanished from a favorite island of cane, grass and saltwater myrtle near the mouth of the Guadalupe River; with them went their White Ibis and White-faced Glossy Ibis neighbors. But the Spoonbills turned up in thriving numbers where a colony had been started on a mesquite- and cactus-covered island not many miles distant; evidently they prefer this sturdier environment. Not so the two Ibises, it seems. Wardens searched for their new home sites unsuccessfully.

Another comeback has been staged along the coast by the Reddish Egret; no less an authority than Ludlow Griscom says it was unknown in Texas during the first twenty years of this century. This season brought to light three new colonies, all north of Corpus Christi, adding nearly 1000 to the graceful and elegant population. Their capital in this country, of course, is the famous Green Island Sanctuary just north of the Mexican border.

At this rate, Texas can soon talk back to Florida on Egret gains. It boasts the magnificent colony at Eagle Lake in Colorado County, now a memorial sanctuary to the late J. J. Carroll, harboring probably the

Photo by Allan D. Cruickshank

The food habits of the Brown Pelican are not prejudicial to any of man's interests

greatest nesting concentration of Yellow-crowned Night Herons in the nation, host to the largest nesting group of Little Blue Herons in Texas, and chief point of recovery for her American Egrets.

Men For and Against Birds

ANOTHER cheer for the Lone Star for placing the Brown Pelican on the protected list! And a tiger for the Federation of Nature Clubs of Texas, which did so much to put it there! But though the state's legislators in due congress assembled have voted that the food habits of the Brown Pelican are not prejudicial to any of man's interests, ignorance overrides the decision by mob rule. When, on June 13, Mr. Allen stepped ashore on one of the spoil banks along the Corpus Christi ship channel, he found the Pelican settlement there a shambles. Of some 180 nests, 134 had been utterly demolished, so kicked about that even to count them was difficult, and the eggs were smashed and scattered. Forty-nine nests had either escaped or been rebuilt, and the doughty birds had refurnished them with eggs or young. The corpses of two adult victims, clubbed or shot, lay rotting on the ground. Find what satisfaction you can in the two newly guarded colonies on the coast, where in 170 and 164 nests the solemn big birds were hoping to raise their young without disturbance.

Colonial nesting sea birds don't profit, at best, from the visits of humans. Their agitation at man's approach to the communal nesting ground is nerve-racking to all concerned, and often highly destructive to the young and the eggs lying exposed on the open sand and shell. Even well-meaning

persons, intent on an intimate glimpse of the birds they declare they love, will cause an appalling amount of damage by investigating too closely or too long, or not waiting until the cool of the evening.

But if the birds have to put up with this, they have had some profit lately from human enterprise. The spoil banks created by the many ship channels and waterways along the coast are proving of real value to several species of Terns, to Black Skimmers, Brown Pelicans, Willets and Laughing Gulls. This is a pleasant exception to the usual train of disasters to wildlife that follows the course of our human progress. We can be feeling cheerful, anyway, about the Tern upturn—at least the Least Terns' (Sorry!). The Caspian, Royal and Forster's Terns are prospering, the Gull-billed Tern less so, and the lovely Cabot's Tern doubtfully. With the Black Skimmer, these birds get washed out along the Texas coast almost every year by high storm tides and heavy rains. On one of the sanctuary islands there Mr. Allen saw some 100 Skimmers and 275 Royal Terns disconsolately regarding the wreck of what had been flourishing colonies, the eggs now scattered and broken by the tide. Better luck is reported from the colonies we have been guarding since 1935 on the Great South Bay along the southern shore of Long Island; here Common Terns number nearly 500, Least Terns 100 or more, and the Skimmers adding up to 100 nesting individuals, at the northernmost limit of their breeding range.

By Skiff into Texan Wilds

WHEN those Ibises along the Guadalupe didn't turn up, Mr. Allen set out to look for their tell-tale flight lines, shoving off from Victoria on June 17 in a small skiff borrowed from the Aransas Migratory Bird Refuge. Here the stream is swift and narrow between high banks, willow-grown, aflash with Belted Kingfishers. Heading toward the inaccessible reaches below Victoria, the skiff slipped between banks growing steeper and wilder, among shallows more numerous, fighting rapids, working through log jams that cost hours of struggle. A diminutive Texas Kingfisher, which must have been close to the northern limit of its range, brightened the long pull; ahead sailed Yellow-crowned Night Herons in silent flight, and Little Blue Herons in many phases of the pied immature plumage. The alligators, sunk in lethargy, roused frantically if the boat approached; Cardinals and Chickadees called across wilderness, and, as it deepened, a group of Pileated Woodpeckers suddenly broke the silence with raucous cries that faded into deeper, lonelier stillness. At night the skiff was tied to a snag out in open water, where the wind kept off mosquitoes. But rain followed wind, and the lightning bugs seemed larger and the Barred Owls louder than they ought. By day the skiff was again moored at frequent intervals, for the oarsman to land and watch for moving birds. Only one Ibis was seen all the way from the highway bridge at Victoria to the Green Lake-Tivoli road, and that was a Wood Ibis. If the lost colony is to be found in that region, ends Mr. Allen's report, it will have to be by some means less strenuous than two nine-hour shifts at the oars!

A Director on the Wing

YOUR Director, on his summertime migrations, has had a bird's-eye view of flocks of many a feather, from Hummingbird to Condor. Heading west from Texas he showed the Association's colored motion pictures of the sanctuaries' beautiful birds to a meeting of the associated Audubon Societies of southern California, under the particular sponsorship of the Pasadena Audubon Society. He also visited a number of areas in the Los Angeles region, which it is hoped may be set up as wildlife sanctuaries, and had the pleasure of seeing, at the home of B. F. Tucker in Modjeska Canyon, a unique Hummingbird haven. Here three or more species, to the number of hundreds, are constantly attracted to a series of 24 quart-size bottles containing sugar and water, and the display of glittering gemlike birds is extraordinary. Mr. Tucker has made the surroundings of his home the happiest sort of sanctuary for birds of many other kinds, with nesting boxes, amply tenanted, in the trees, and feeding shelves at which Quail, Black-headed Grosbeaks, Towhees, Doves, and Woodpeckers make a background for the brilliant dance of Hummingbirds. It is Mr. Tucker's desire and intention to make provision for permanent maintenance of a sanctuary here.

The other extreme of bird size was featured at the meeting of the American Ornithologists' Union in Berkeley, when J. R. Pemberton showed motion pictures, partly in color, taken by him through a period of three years, of the California Condor. These intimately revealed the daily life of this remote and lordly survivor, from the time that it awakes and stretches its wings in the morning, preparing to take flight, through the day's feeding and drinking, and back to the roost at night. This year a nest was found by Mr. Koford, the research fellow on the Audubon Condor project, and Mr. Pemberton had remarkable success in getting pictures with a 24-inch lens of not only the old bird at the nest, but of the egg and young.

At a ranch in the Carmel Valley your Director was impressed with a long-term intensive study now under way on some 1600 acres of animal life and its food supplies. The thoroughness with which the work by Dr. Jean M. Linsdale and associates has been planned, promises results of import to conservation.

On to San Francisco, and a meeting of the International Fish and Game Commissioners, with an address given on the subject of coördination of related interests. Then forth again, accompanied by five regional managers of the Biological Survey and one of its enforcement agents, to a series of wildlife refuges it maintains in northern California, southern Oregon, and northwestern Nevada. In the refuges at Willows and Tule Lake, Calif., at Malheur Lake and Hart Mountain, Ore., and at the Charles Sheldon Refuge in Nevada, as well as on both Lower and Upper Klamath lakes, the Biological Survey is engaged in development projects. These are not yet completed, but the extent to which waterfowl and other birds have promptly capitalized upon the opportunities offered them through provision of increased food, water, and cover, is impressive testimony to the certain value of the breeding-ground restoration program of the Federal government. It is a delight to see not only quantities of Ducks and Geese thriving in these areas, but also such birds as American Egrets, Avocets, Black-necked Stilts, Forster's Terns, White Pelicans, and that original jitterbug, the Wilson's Phalarope. The wild animals on the Charles Sheldon Refuge particularly reflected the intense interest of the refuge manager in their protection; here prong-horned antelope, mule deer, and Sage Grouse were tamer than in any other areas visited. The members of the National Association of Audubon Societies and the Boone and Crockett Club may well take satisfaction in the part they played in the establishment of this refuge

Nesting on Okeechobee

UP FROM Florida, in the close typing of Mr. Alexander Sprunt, comes news of that world of wings and water, Lake Okeechobee. It has been a fine season on the lake, with as many as 1000 pairs of Glossy Ibises raising an average of two young; these are all on the wing by Independence Day, and until that date the Audubon warden is right on the ground to watch over them. Though no White Ibises nested here, about 2000 used the area as a roost. Several hundred pairs of young Egrets had taken wing, as the report went in, and Louisiana as well as Snowy Herons had brought off young. Limpkins were more abundant than ever. Again the spoil banks, this time at the mouth of the Kissimmee, proved favorable to the Least Terns. In many other parts of the country where man-made waterways have caused the appearance of these spoil banks, Least Terns have showed a gratifying increase in numbers.

This is all Warden Chandler's territory, and he is keeping a shrewd patrol over it. Right at home, in the shack which forms his base, he has had a special bit of nesting under his eye—that of a Florida Wren which has settled in there with its family as the warden's boarders! Seeing the pair looking for a home site, he fixed them a small pasteboard box, and they moved right in. The eggs hatched, and though the box was moved all around inside the shack, the parents were undisturbed by this, coming in freely to feed the young, and hop about over the floor and between their landlord's feet. Wasp larvæ were a staple. The male did not feed the young, Warden Chandler noticed, but, when he brought food, waited for the female and gave it to her to feed the young. This Wren box sounds like the *sanctum sanctorum* of Audubon protection!

Counting Spoonbills and Mosquitoes

OFF for a survey of the Ten Thousand Islands area went Mr. Sprunt in late June, aboard our navy, the *Audubon*, patrol boat of the Association, Warden Ray Barnes, captain, and the new assistant 'Dollar Bill' Brown as crew. 'Dollar,' who was born and raised in the Everglades, knows the waterways and islands like the palm of his hand, and can take a boat through that baffling labyrinth even on the blackest night. Having lived by fish most of his life, he knows them and all their habits, and can as easily name any passing boat at a great distance across the shimmering waters, yes, and tell you who's aboard and what he's probably up to. Scout craft like this is what the sanctuaries need.

The expedition found that the birds were returning to Florida's southwest coast in daily increasing numbers, from north, south, and especially east, breaking and wheeling about Buzzard Key in such flocks that count was difficult. As many as 20,000 had come home to their mangrove swamps and pearly lagoons, with more arriving every day. Between 225 and 250 Spoonbills were certainly accounted for—the entire Spoonbill population of Florida to date.

Vigilance is eternally necessary; the guns are not wholly silenced, and the warden has to play a cat-and-mouse game to catch the violators. He has a trick of appearing in a spot almost immediately after he has appeared to quit that territory, which has so confused illegal hunters that they never know when to expect him. The *Audubon* is anchored out of sight of boats passing up and down the coast, so that its presence cannot be generally reported. Friendly fishermen report suspicious characters, and these are kept under Audubon surveillance.

The boats are kept in fine shape, and neat as a pin. Screens on the *Audubon* now protect the birds' protectors from the mosquito hordes that about sundown come out of the mangroves in clouds. Settling on the screens to leeward, they actually obscure vision. A count found them averaging eight to the square inch, and when darkness settles down the sound of them is like the high, metallic humming of a high-tension power line to the patrol safely sheltered on deck inside the screens.

Tree, Bird and Insect Triangle

CALLING in the birds, a research project of broad significance, is under way in New Jersey, where the Department of Conservation has been much concerned over the destruction of forest trees by the canker-worm, white linden moth, and several other insects which come to cyclical peaks. Three tracts of 5 acres each have been marked off in three different sections of the state. Broad isolation strips will separate the 5-acre plots in each case.

One plot in each place will be left as it is. One will be managed by silviculture, to create a better understory, etc. On the third area birdhouses will be placed. And the plots are to be censused, both as to bird population and insect devastation, each June for the next several years.

Roger Tory Peterson of the Association staff is taking a census of the birds on the nine plots during the nesting season. Assigned to the project as well are an entomologist and a forester; CCC boys were used to survey and lay out these experimental areas.

The second season of work was completed in the June just past. It is too soon to report how successfully a forest bird population can be increased by such management, and remain in the realm of practical forestry. But light is certain to grow upon the obscure and significant relationships between insects, trees, and birds.

Recommendations as to 1939 Waterfowl Hunting Regulations

THE views of our Board on the controversial subject of appropriate waterfowl hunting regulations for the season of 1939 have been made known to the President of the United States, the Secretary of the Interior, and the Chief of the U. S. Biological Survey. This year, for the first time, it is the responsibility of the Secretary of the Interior rather than the Secretary of Agriculture to submit to the President, as the basis of an Executive Order, recommendations as to these regulations.

We have urged that for the 1939 season there be no relaxation of the regulations of 1938, that the one-day possession limit be restored, that the bag limit on Geese be reduced, and that, in view of the wisdom of a

Photo by Allan D. Cruickshank

High storm tides and heavy rains are destructive to nests of the Black Skimmer in Texas

policy of more speedily building up an adequate breeding stock, the number of days of consecutive shooting be reduced from 45 to 30.

In arriving at these conclusions our Board was influenced by the following considerations:

1. The great increase in the number of waterfowl hunters, as demonstrated by the number of Duck Stamps sold, rising from 448,204 in 1935–36 to nearly 1,000,000 in 1938–39, is out of proportion to the increase in waterfowl. This tends largely to offset the benefits of the breeding-ground restoration, refuge and hunting regulation programs, and to outweigh good news from the breeding grounds of favorable rainfall conditions and good hatch of young birds this summer.

2. The rate of increase in total waterfowl supply would not seem to be sufficient to provide against inevitable years of adverse rainfall conditions on breeding grounds, and the capacity of existing breeding grounds is at present far in excess of occupancy by waterfowl.

3. The number of consecutive days' shooting was increased in 1938 from 30 to 45 and we held that such increase was excessive, inasmuch as it was admittedly disproportionate to the increase in supply.

4. There still are waterfowl hunting groups and individuals who urge restoration of permits to use bait and live decoys, and it is our conviction that these destructive practices should never again be permitted. Already their banning has promoted fairer distribution of hunting opportunity and better sport.

5. Inventory taken by the government last winter did not disclose expected increase in total supply of Geese.

6. The two-day possession limit regulation (extended from one day a year ago) has increased violations of the bag limit and made the enforcement job more difficult.

7. First consideration should be given to preserving an adequate supply of birds.

Great Name, Great Cause

MAY 17 saw the celebration of ceremonies at the Roosevelt Bird Sanctuary at Oyster Bay. Due to the devoted labors of the sanctuary superintendents, this fair spot, which less than a generation ago was a weedy tangle of neglect, has become a model in miniature of what conservation can do throughout the land to increase the wildlife population. Through wise planting and protection, the number of breeding birds here was raised, not only high above its past average, but higher, probably, than the average of any similar area on Long Island. A Nature Trail and Nature Museum in the

Sanctuary are to widen its purpose and demonstrate to reverent visitors that the cause so valiantly supported here is a common and national cause.

Master of the ceremonies was your Executive Director. An official welcome was given by Harry Tappan, Supervisor of the Town of Oyster Bay, and messages were read from our Honorary President, Dr. Chapman, from our President, Dr. Murphy, and from Henry von L. Meyer, President of the Youngs Memorial Cemetery. Colonel Theodore Roosevelt, representing his illustrious family, greeted other leading figures of the occasion, Dr. T. Gilbert Pearson, our President Emeritus, Mrs. Bessie Potter Vonnoh, sculptress of the Memorial Fountain, Howard C. Smith, member of the Executive Committee of the Roosevelt Memorial Association, Leon J. Deming, Superintendent of Schools, Oyster Bay, and Mrs. William Loeb, Director of the Bird Club of Long Island.

Fish Must Live—So Must Birds

FISH-EATING birds need fish, but they are not too welcome at fish hatcheries. There is no doubt that widespread destruction of such birds results, much of it unnecessary, and that steps should be taken to conserve an adequate breeding stock of these species. Toward that end the Association has been making a factual survey of conditions existing in the New England States, New York, Pennsylvania, and New Jersey; it covers Federal, state, and private hatcheries, bait dealers, and fish ponds At the moment, Mr. Pough is covering northern New England, where weather conditions delayed inquiries earlier in the season, and by the time this issue appears the survey will have been practically completed. A report on this will be presented in due course to our readers, as well as to Federal and state agencies administering such hatcheries

Nominations by Official Committee

THE Nominating Committee of the Association, consisting of Carl W. Buchheister, Secretary-Treasurer of the Massachusetts Audubon Society, Chairman, Joseph M. Heiser, Jr., of Houston, Texas, and the Houston Outdoor Nature Club, and C. Russell Mason of Sanford, Fla., President of the Florida Audubon Society, reports that it nominates for consideration by the members at the annual meeting in October, 1939, the following:

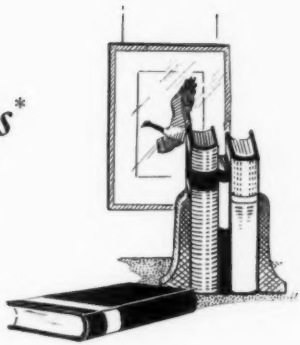
For directors of the Association for three-year terms, expiring in October, 1942—Roger N. Baldwin, Guy Emerson, Dr. James J. Murray, Fay Welch, and Mrs. Robert C. Wright. These are present members of the Board whose terms expire in October of this year, and who may be nominated for re-election in accordance with the provisions of the existing by-laws of the Association.

It nominates for election as members of the Association's Advisory Board, the following: Alabama, the Rev. H. E. Wheeler; Alaska, Otto William Geist; Arizona, Dr. Charles T. Vorhies; Arkansas, Prof. William J. Baerg; California, W. Lee Chambers; Colorado, Robert Niedrach; Connecticut, Aretas A. Saunders; Delaware, Dr. Julian W. Hill; District of Columbia, Dr. Alexander Wetmore; Florida, Dr. Herbert R. Mills; Georgia, Herbert L. Stoddard; Idaho, Victor Jones; Illinois, Dr. S. C. Kendeigh; Indiana, Samuel E. Perkins, III; Iowa, Walter M. Rosene; Kansas, H. H. Lane; Kentucky, Dr. Gordon Wilson; Louisiana, Stanley C. Arthur; Maine, Dr. Alfred O. Gross; Maryland, Dr. R. V. Truitt; Massachusetts, Ludlow Griscom; Michigan, Prof. S. A. Graham; Minnesota, Dr. Thomas S. Roberts; Mississippi, Miss Fannye A. Cook; Missouri, Sterling P. Jones; Nebraska, Prof. Myron H. Swenk; Nevada, George Springmeyer; New Hampshire, Francis B. White; New Jersey, James L. Edwards; New Mexico, Ernest Thompson Seton; New York, Dr. Arthur A. Allen; North Carolina, the Rev. John H. Grey; North Dakota, Russel Reid; Ohio, Edward S. Thomas; Oklahoma, Prof. A. O. Weese; Oregon, William L. Finley; Pennsylvania, Norman J. McDonald; Rhode Island, Mrs. H. E. Walter; South Carolina, Edward Milby Burton; South Dakota, Philip Dumont; Tennessee, Albert F. Ganier; Texas, Jerry E. Stillwell; Utah, Dr. Vasco M. Tanner; Vermont, Prof. Henry F. Perkins; Virginia, Prof. Charles O. Handley; Washington, Harry W. Higman; West Virginia, A. B. Brooks; Wisconsin, Prof. Leon J. Cole; Wyoming, O. J. Murie.

*Book Reviews**

By

LOUIS J. HALLE, JR.



HERE, on the shelf before me, are eleven newly published books for review, their only excuse for sharing one shelf being a common concern with some aspect or other of nature. I notice, about this shelf, several curious facts from which I am tempted to generalize. Nine of the eleven books are by American authors, two are English productions. Of the nine, eight are utilitarian in the sense that they were written toward definite and practical ends. These eight are either educational and instructive, or they seek to enroll us under the banner of a cause, to turn us from wrong ideologies to right ones, to save us from whatever the prevalent form of perdition happens to be. All the American books except one were written for our intellectual and moral improvement.

The English authors are more gentlemanly. You can see from the first word that they are modest fellows whose only wish is to share with us some of the pleasant experiences they have had in the course of observing nature; they would never think of lecturing us or undertaking our salvation. I, personally, am grateful to them for that. When I finished reading 'The Feathered Folk of an Estuary'[1] by G. B. Farrar, I had learned hardly a single new fact about birds and I am sure I had not improved in the way of right-mindedness, but I had obtained that indirect enrichment of experience which heightens all direct enjoyment and appreciation. Take this one passage for example:

> Go to the estuary any day in spring or autumn when a high tide has covered the sandbanks and watch the huge flocks of mixed waders, dunlin sanderling, ringed plover, with, maybe, curlew sandpiper and little stint, flying in mazy circles up and down the foreshore. . . . Now they are bunched together, a grey smoke cloud driving over the waters; a moment later the cloud has dissolved into a thin silvery line of flickering wings moving in regular waves like the undulating progress of some aerial sea serpent. In an instant, the sea serpent becomes a chevron, the chevron an arc, the arc a sinuous curving line of flying birds, the flock merging into fantastic shapes and figures like the edges of storm clouds driven before a high wind.

You can see plainly that the author has, in the first place, been moved by his experience, and because he has been moved he has taken pains to give it such a verbal form that it may at any time be re-evoked, not only for himself, but for all of us, even though we may never have seen a flood tide on the coast of Wales. His addition of that serpent to our familiar fauna makes, surely, just as valuable a contribution to our education as would some other author's information on a new subspecies of *Pelidna alpina*.

Of course, the whole book is not on that level. But there are one or two passages, and a whole chapter on the life history of the Sanderling, that I am not likely to forget, and what more could I ask of any book that is, like this one, short and modest? Mr. Farrar follows the migrations of Ducks and shore birds along the coast of Wales, his

**With the thought that it will be an interesting and valuable innovation to have the entire book review section written by one professional book reviewer each issue, such feature is inaugurated in this number. This contribution of Mr. Halle's will be followed in the September–October issue with a section contributed by Mr. John Kieran.*—ED.

[1]New York: Charles Scribner's Sons. 1939. $3.75.

chief hunting-grounds being the sands o'Dee, across which a maid named Mary once went to call the cattle home. Besides the text, there are 39 photographs, mostly of shore birds, that are as notable as anything in that line I have seen.

The other English book on the shelf, 'Bird Watching Days'[2] by Robertson and Powell, is not nearly so good; as a matter of fact, I put it down after the first few chapters and forgot to pick it up again. Like Mr. Farrar, the authors are concerned only with sharing their experiences, but they lack the quality of imagination that might make those experiences memorable for the reader. Their account of nesting Ravens and preying Peregrines is more factual, and the only literary comments they find to make about their observations are, for the most part, those that have been made before.

* * *

'BIRD WATCHING DAYS' seems to me to illustrate all the negative vices of English nature writing at its weakest. 'Birds'[3] by Gayle Pickwell illustrates the positive vices of our American nature writing at its worst. Though I expect the author would deny it vigorously, I think he conceived and wrote the book with a feeling of disrespect for the readers at whom he directed it. That, at any rate, is what I gather from the text, which gives the impression of having been carelessly thrown together for the consumption of a gullible lay public that could be expected to accept anything in a gilt setting as gold. And the setting is spectacular: a large volume with a glossy jacket and some sixty or more photographic illustrations blown up to imposing size, all for $3.50—here y'are, folks, come and get it! It is the first volume that would catch the eye in any bookstore; a far better, though modest, book like 'The Feathered Folk of an Estuary' would be lost on the shelf beside it.

The text purports to be, and I suppose it is, educational, an introduction to the observation and study of birds. Good, so far! But its style is such as to put one on the lookout for some author's note explaining that the manuscript had been "dictated but not read." Beginning with a series of short paragraphs that instruct us in why we should like birds ("Like a bird because it is a bird, a creature of sheer fascination. Rub out the dollar sign that heads your interest."), it proceeds to toss out a bushelful of loosely related or wholly unrelated facts about birds.

The factual information itself, regardless of how presented, is sometimes misleading. I do not know just what has led ornithologists to separate the Hawks and Owls, once grouped as a single order, into two distinct categories. But I doubt Dr. Pickwell's assertion that the basis for it is that: "unlike hawks, the owls have large eyes set in a face and both directed forward, and not on the sides of the head. Also, most owl legs are feathered to the toes, whereas this is true of only one or two hawks." Eyes, as a matter of fact, are directed forward in Hawks as well as in Owls, and in the case of the Harriers they are even set in a face. It would seem to me more reasonable to say that the two groups are separate merely because Hawks don't give a hoot.

The text, I take it, is actually mere 'filler,' and not the main reason for the book's publication. The author's photographs provide the featured attraction, and these are excellent. But most of them are enlarged to a point where they pay heavily in clarity of outline for the spectacular effect of their size.

* * *

ROBERT SNEDIGAR, in an attractive volume called 'Our Small Native Animals: Their Habits and Care,'[4] offers the most practical instruction of any of these books. What countless handbooks do for poultry keeping, sheep raising, and all the other forms of livestock management, this does for the art of domesticating the undomesticated. If you are in a position where you are apt at any time to find some orphaned creature of the wild depending on you for its survival, and everyone who lives in the country is, you should have this book handy. Mr. Snedigar does not cover all the native species suitable for captivity but he does cover the main groups, fish excepted. Meadow mice, skunks, snakes, wildcats, frogs, lizards, Sparrow Hawks, alligators—

[2]London: Collins. 1938. 7s. 6d.
[3]New York: Whittlesey House. 1939. $3.50.
[4]New York: Random House. 1939. $2.50.

the particular environment and food supply needed by each is briefly outlined, together with a word on the habits and temperaments of these species in their native wilds. In addition to this, and quite gratuitously, the volume is so entertainingly written and contains so much of general interest that it can be read merely for pleasure and information, without reference to any particular contingency with which the reader may be faced.

* * *

ANOTHER book for whose publication I am grateful is Frederick C. Lincoln's 'The Migration of American Birds.'[5] Far more than Dr. Pickwell's catchall, it shows cause why we should get excited about birds. And yet, all Mr. Lincoln has done is to give a straightforward and coherent account of the migratory movements of American species, in so far as they are known to science, and whatever additional information concerning the methods and meaning of migration has come to light since the day when Audubon inaugurated birdbanding on this continent by tying silver threads to the legs of Phoebes. His is a readable report to the interested section of the general public on progress up to date. Little if any of the information will be news to students. What is conspicuously useful in this handsome publication is that it assembles hitherto scattered material between one pair of covers. Because it presents the most fascinating and, to us slaves of gravity, the most wonderful aspect of bird life, it is a fascinating and wonderful book. Some 22 maps show the travels of Hummingbirds, Geese, Bobolinks, Terns, and many other feathered travelers whose world is so much smaller and larger than ours. Twelve well-known and, unfortunately, well-worn color plates of American birds, originally painted by Fuertes for the New York Museum, are interspersed in its pages.

* * *

READING Carleton Beals' 'American Earth: the Biography of a Nation'[6] after Messrs. Pickwell, Snedigar, and Lincoln, is like dropping in on a lecture by a missionary on the way home from a convention of scientists. What Mr. Beals has done is to give a partial account of the historical relationship of European man to this soil of his adoption, treating it from the point of view of a fervent twentieth-century moralist. He depicts that historical relationship, in terms of his own morality, as a long and bloody struggle between the cohorts of the devil and the ranks of the angels who, I am sorry to report, seem to have lost out all down the line. First off, Mr. Beals is morally outraged by the action of the white man in crossing the ocean and robbing the helpless Indian of a continent. I see his point, of course, but I can't help recalling that he and I, if we were living at all, would be in a bad way for the civilized amenities by which we set store if our high-handed forefathers had left the million aboriginal inhabitants undisturbed in their possession. I imagine that if humanity had always lived up to Mr. Beals' code, which serves him so well as an afterthought, it would still be running naked in its ancestral woods. And I blush to speculate on what a frontiersman of the old days, who made his living under the terrible threat of sudden attack, would have thought if he could have known Mr. Beals' opinion of his moral character and the inalienable rights of his foeman.

If it seems absurd that Mr. Beals should be shocked by the discovery that our forefathers were not motivated by twentieth-century morals, it naturally seems less so as his 'biography' traces the history of the development of this country and so gradually approaches the present. In fact, his comments on the spoliation of our natural resources make only too excellent sense. Nevertheless, the fact remains that if I want to understand even our contemporary social ills, I shall not of my free choice consult a book that flames from cover to cover with righteous indignation, but one that favors light over heat.

* * *

I MENTIONED that, in contrast to the English books, only one of the American volumes on this shelf made no attempt to improve us by information or advice. On reconsideration I have to qualify that statement

[5]New York: Doubleday, Doran & Company. 1939. $4.00.

[6]New York: J. B. Lippincott Company. 1939. $3.00.

for 'Wings at Dusk,'[7] by Eugene Edmund Murphey, though it is a slender volume of poems that deal with bird life, mostly treats of birds to point a human moral. A poem entitled 'Nigger Geese' sets forth that, as the Chinese train Cormorants for fishing, so the southern black man is used but as "a cushion between the white-man and the rough spots of life." The morals, as in this sample, are usually simple, straightforward, and delivered with an air of finality. Most of the lyrics have a free meter, and I found them a bit prosy for my taste. If poetry is song, then these, with a few exceptions, are something else.

* * *

IT REMAINS to mention briefly four specialized volumes. Two of these—'Our Natural Resources and Their Conservation'[8] edited by Parkins and Whitaker, and 'Conservation in the United States'[9] by members of the faculty of Cornell University—are textbooks. The first, merely a revision of an earlier edition, is the more detailed and complete. If you want the same material summarized at about half the length, read the second. Both are excellent.

If you have a child in the family and want to get him started on the paths of ornithology, by all means get Roger Tory Peterson's 'The Junior Book of Birds.'[10] Not even the book, let alone the author, needs an introduction to readers of BIRD-LORE, since it is based on the familiar Audubon leaflets. Expertly presented and illustrated, it is undoubtedly the best book available for its purpose.

[7]New York: Longmans, Green & Company. 1939. $2.00.

[8]New York: John Wiley & Sons. 1939. $5.00.

[9]Ithaca: Comstock Publishing Company. 1939. $3.00.

[10]Boston: Houghton Mifflin Company. 1939. $2.00.

Edwin Way Teale, author of the current 'The Boys' Book of Insects,'[11] is the man who gave us 'Grassroot Jungles.' This establishes his qualifications. For the rest, if this instructive boys' book does not turn any boy who reads it into a budding entomologist, nothing else ever will.

[11]New York: E. P. Dutton & Company. 1939. $2.00.

Recent Publications

Edited by S. C. HARRIOT

ALDOUS, SHALER E. and CLARENCE F. SMITH. Fall and Winter Food Habits of Deer in Northeastern Minnesota. Wildlife Research and Management Leaflet BS–137. Washington, D. C.: U. S. Bureau of Biological Survey. Free.

ANDRUS, VERA. Sea-Bird Island. New York: Harcourt, Brace & Co. $2.00.

BENT, ARTHUR CLEVELAND. Life Histories of North American Woodpeckers. U. S. National Museum Bulletin 174. Washington, D. C.: Superintendent of Documents. 50 cts.

BOND, ELIZABETH A. and JOAN RABIN. Crunch, the Squirrel. New York: Dodd, Mead & Co. $1.50. Juvenile.

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SEARS, PAUL B. Life and Environment. New York: Teachers College, Columbia University. $1.85.

SIMPSON, CHARLES. Animal and Bird Painting; the Outlook and Technique of the Artist. New York: Charles Scribner's Sons. $3.75.

TURNER, JOHN H. Bear, Mouse and Water Beetle. New York: E. P. Dutton & Co. $2.00.

VAN COEVERING, JACK. Real Boys and Girls Go Birding. Philadelphia, Pa.: J. B. Lippincott Co. $2.00. Juvenile.

For the convenience of our readers, all of the books listed above, with the exception of State and Federal publications, may be purchased from the Service Department of the AUDUBON ASSOCIATION.

Breeding-Bird Censuses Due!

If you made a count of nesting birds during the spring and summer, don't forget to send in your report to the Editor as early as possible—and not later than August 18. The third Breeding-Bird Census will be published in the next issue of BIRD-LORE, and all contributions should follow the regulations as outlined in the March-April, 1938, issue.

THE SEASON

CXXVIII. April 15 to June 15, 1939

Boston Region.—It will be recalled that the season was backward on April 15. There was still 3 feet of snow in northern New England, with continuous chilly winds from the northwest far southward. The 'spring floods' in rivers and swamps began three weeks late and lasted into early May. Near the coast continuous cold east winds were the rule, when the northwest winds failed, so that the vegetation on May 10 was more backward near Boston than ever previously known, exceeding even the cold spring of 1917. There could not have been a sharper contrast with the phenomenally warm and early spring last year. From May 13 to 17 light frosts occurred every night near Boston. After this the temperature became normal. Precipitation was notably deficient throughout the period, and is now becoming serious.

So abnormal a season had very marked repercussions on the bird life. With the very great majority of species, the first individuals of both summer residents and transients arrived about on time, but the bulk arrival was often very belated. The departure northward of all groups of winter residents and transients was equally belated, in many cases furnishing all-time record dates. Thus, Redpolls lingered near Boston until the last days of April, the last Fox Sparrow collided with the first Black-throated Green Warbler, the Canada Goose was still positively abundant in early May, and many other species of waterfowl lingered remarkably late. Ring-necked Ducks, for instance, were found in Massachusetts for the first time in May. Near the coast the high water in the river valleys and the constant east winds probably accounted for the remarkable number of records of maritime species at inland points, where they are normally accidental stragglers.

Near the coast the migration was pretty thin the last half of April, with no real wave, and birds common only on the 25th. In the Connecticut Valley, however, a heat-wave brought great waves on April 22 to 25. Near Boston, on May 7, a wave brought all the summer residents due at that time, numbers of all the missing April species, and a very few May transients. It was indeed remarkable to hear a chorus of Wood Thrushes and Oven-birds in woods where not one leaf could be seen and the only sign of spring was the red maple in bloom, six weeks later than last year! On May 18 observers were compensated for a relatively birdless month. A great wave rolled in, with birds in such great variety and abundance that Mr. Curtis and I noted 120 species in Essex County in half a day, and I never saw so many individuals of some species in one day in New England. Ideal conditions caused me to predict another wave on May 20. Arrangements were perfected for a very long day over a well-tried route in Essex County. Mr. Garrison and I began at 3 A.M. and were met by a competent party at dawn. This wave can only be described as prodigious and spectacular. I had not supposed that Warblers could ever be so abundant in eastern Massachusetts. Once, six years before, Mr. Emilio and I recorded 133 species over this route, but otherwise a decade's experience only passed 125 species 3 times. On May 20 we listed 142 species by sunset, and the whole day could easily have been spent in any one of 4 different sections of the route. From then on birds remained common until May 27, but Red-eyed Vireos, Waxwings, Cuckoos, etc., did not complete their arrival until the first days of June.

This season, therefore, furnishes an exact parallel with 1917, when Mr. Brewster had never seen so few birds until May 19 at Concord, and never saw so many (Warblers, for instance) by the time the migration was over. With nearly every Warbler, my own counts are from 50 per cent to 2½ times as great as my previous best in twelve years.

There were, of course, some interesting paradoxes. The Cape May Warbler paid no attention to the season, arrived on May 7, and concluded its migration about the time the other Warblers became abundant. The shore birds were also exceptionally early, rivaling the record year 1930 in this respect, and the peak of the flight at Monomoy was over on May 28. The Least Bittern and all the Swallows were also very early.

Quite in line with expectations was the marked falling off in records of austral species. Those before me are less than 50 per cent of the number reported the past two years. Of particular note are a Fish Crow, Cambridge, April 20 (Griscom); a Cerulean Warbler, Brookline, May 21 (Juliet Richardson, Kellogg, *et al.*); a Wilson's Plover, Scituate, May 25 (F. H. Allen, *et al.*); a White-eyed Vireo, Nahant, May 26 (Mrs. Frances Elkins and Griscom); a Gnatcatcher, Topsfield, May 7 (Mr. and Mrs. Cottrell); another at Northampton on May 8 (Wakeman and Eliot), the third year in succession on this date in the Connecticut Valley! This species is mentioned last for emphasis. The facts are that, *regardless of weather*, this little bird is a *regular transient* in this state in early May, August, and September.

On April 29, a White-crowned Sparrow was reported in Cambridge. Suspicious of an abnormally early record in an abnormally late spring, I studied this bird with several friends on May 1, and we proved it to be a Gambel's Sparrow. It was collected to validate the first New England record.—Ludlow Griscom, *Museum of Comparative Zoölogy, Cambridge, Mass.*

New York Region.—To state the obvious facts about the spring migration, it might be said that: though there was a very early movement in April, and it continued through the month, with very good numbers of migrants almost every day of late April, May was a disappointing month; waves in May were few and did not come out on the week-ends; though there were plenty of species about the region, figures of previous years were not endangered of being topped; with all, the number of rarities was almost up to par; in other words, an observer going out every day might accumulate a list not inferior to a 'good' spring, but an 'on-and-off' observer, such as many are forced to be, might not see everything that he or she expected.

The weather was rainy and cold in the latter part of April, and very dry and generally hot in May and early June. The lack of rain in our region so early in the year (for the droughts usually are in July or August) threatened the farmers' crops, lowered streams, almost completely dried out shallow ponds, and scorched lawns and golf courses brown. Days were clear and hardly a cloud was seen for days, that in part aiding the birds in their migration, and hardly ever forcing the birds to land, as fogs and rains are wont to do.

In general, water birds and Ducks were recorded very late in good numbers, Gulls and Terns in normal quantities, shore birds were very numerous on a few certain days of May, Hawks appeared in small numbers except in New Jersey's flight-lines, Flycatchers were never numerous, and all the rest of the Passerines were less common than normal.

Wave days as recorded by a constant observer were May 14, 18, and 25, and lesser flights on May 5, 6, 7, 10, 11, 19, and 28.

The following are the more interesting of the many notes sent in by observers:

A flight of Loons was noted as late as May 28, Jones Beach, L. I. (Sedwitz, Jacobson). Holboell's Grebe, 21, April 22, Long Beach, L. I. (Mayer); Horned Grebe, 1, May 25, Idlewild, L. I. (Mayer). Sooty Shearwater, 2, May 28, and 16, June 4, Jones Beach (Jacobson, Sedwitz, Allyn, Whitman). Early Wilson's Petrel, 1, May 28, Atlantic Beach, L. I. (Mayer). Gannet, May 28 and June 4, Jones Beach, L. I. (Jacobson, Sedwitz, *et al.*). Double-crested Cormorants still in flights in early June (Mayer). White Heron records are few: American Egret, Idlewild, L. I., April 16–24 (Mayer); 4, June 4, and 6 on June 11 (Jacobson, Sedwitz, *et al.*). Little Blue Heron, 2 immatures, Newark, N. J., May 20 (Eynon); May 6, 1 adult, Hempstead, L. I. (Jacobson, Fleischer). Yellow-crowned Night Heron, an immature molting into adult plumage, April 29, Old Mill, L. I. (Imhof); 1, May 14, Absecon, N. J. (Eynon *et al.*); 1 immature, Idlewild, May 13, 19, 20, 25, 27, June 4 (Mayer). Least Bittern

April 23, Van Cortlandt Park (Norse); 5 pairs breeding, Idlewild, L. I. (Mayer). Glossy Ibis, an extremely rare spring visitant, Troy Meadows, N. J., May 21 (Edwards).

Ruffed Grouse, with a young chick, Wyanokie, N. J., census, June 3. King Rail, April 23, Van Cortlandt Park (Norse); 1, May 14, Dismal Swamp, N. J. (Cant, *et al.*). Sora, breeding at Idlewild, L. I., May 5 (Mayer). Another tid-bit of the migration turned up at Peekskill, N. Y., where a Purple Gallinule was very carefully and easily observed from a dining car on May 31 (Breslau). Another bird of the South that we hardly even hear about in the region was recorded for the third consecutive year at the same location—an Oyster-catcher at Moriches Inlet, L. I., June 10 (Wilcox). Semipalmated Plover, 6000, May 17, Idlewild, L. I. (Mayer). Golden Plover, May 5 and 13, Idlewild, L. I. (Mayer). Black-bellied Plover, 1200, Idlewild, L. I., May 17 (Mayer). Spotted Sandpiper, April 16, Idlewild, L. I. (Mayer). Several records from the coast of single Lesser Yellow-legs. Purple Sandpiper, 9, May 7, Atlantic Beach, L. I. (Mayer); May 14, Beach Haven, N. J. (Cant). Baird's Sandpiper, 1, May 16, 17 and 25, Idlewild, L. I. (Mayer). Least Sandpiper, 5000, May 19, Idlewild, L. I. (Mayer). Curlew Sandpiper, in the brightest of plumages, again made its appearance at the Jones Beach pond, L. I., May 28 (Jacobson, Sedwitz, *et al.*); it was noted by many observers, May 30, at the same location. Dowitcher, 8000, May 12, Idlewild, L. I. (Mayer). Semipalmated Sandpiper, 4000, May 25, Idlewild, L. I. (Mayer). Western Sandpiper, May 6, Oak Island, L. I. (Jacobson, Fleischer). Hudsonian Godwit, a very rare spring migrant, was present at Idlewild, L. I., from May 13 to 17 (Mayer). Red Phalarope, 3000, May 16, Easthampton, L. I. (Helmuth).

Acadian Flycatcher, present, Swimming River, N. J., June 11 (Black, Seeley). Olive-sided Flycatcher, May 26, Idlewild, L. I. (Mayer); very scarce this spring. Prairie Horned Lark, breeding at Idlewild, 5 pairs (Mayer); Elizabeth, N. J., fill, a pair; Moonachie Swamp, N. J., present (Urner Ornithological Club). Tufted Titmouse, 1, May 5, Idlewild, L. I. (Mayer). Short-billed Marsh Wren, near Lake Mahopac, nest and eggs (Breslau); breeding at Seaford, L. I. Mockingbird, April 25, Jones Beach, L. I. (Jacobson). Veery, probably breeding, Cold Spring Harbor, L. I. (McKeever). White-eyed Vireo, May 30, Central Park (Sedwitz). Warbling Vireo, breeding at Idlewild, L. I. (Mayer). Prothonotary Warbler, 1, April 30, Bronx Park (Komosowski, Milch). Worm-eating Warbler, breeding, Cold Spring Harbor, L. I. (McKeever). Orange-crowned Warbler, April 30, Newark, N. J. (Lang); May 14, Woodmere, L. I. (Allyn, Sedwitz, Whitman). Louisiana Water-Thrush, breeding at Cold Spring Harbor, L. I. (McKeever). Kentucky Warbler, June 10, South Mountain Reservation, N. J. (Hunn); a pair, West Englewood cliffs, N. J., June 3 (Mayer). Two records of seeming authenticity of that rare spring migrant, Connecticut Warbler, are here given: 3, May 6, Makania Swamp, N. J. (Hunn); 1, singing male, May 13, St. James, L. I. (James W. Lane). Several breeding records were sent in for the Chat on northern Long Island, where they might have been but were never before detected. Summer Tanager, April 22–23, Bronx Park (Milch, *et al.*). Strange locale for a Seaside Sparrow is Van Cortlandt Park, yet a bird was seen on April 30 (Norse, Staloff). Brewster's Warbler was observed in many places this spring, but the bird was found on location, not far from a Lawrence's Warbler, at Lake Carmel, Westchester Co. (Breslau); Lawrence's Warbler, High Point, N. J., June 18 (Norse, Staloff).—Walter Sedwitz, *New York, N. Y.*

Philadelphia Region.—Cold weather prevailed throughout the April and May season of migration. A. M. Clark, who averaged three hours a day in the field from April 15 to June 12, reported that the Warbler migration as a whole was comparatively uninteresting—long and drawn out with few pronounced waves. Yellow Palm and Blackpoll Warblers were unusually abundant. The former was first noted at Chestnut Hill, Pa., on April 19 and last seen on May 2. The latter arrived on April 27 and was still passing in waves on May 25.

The outstanding feature of the Warbler migration was the number of Lawrence's

Warblers noted. Records at hand are as follows: Germantown, Pa., April 27, Miss Eleanor Emlen, 1; Elkins Park, Pa., May 4, Whitten, 1; Chestnut Hill, Pa., May 7, Clark, 1; Ardmore, Pa., May 6, Groskin, 1; Moorestown, N. J., May 7, Haines, 1. Observers reported Golden-winged Warblers in greater numbers than usual. One Brewster's Warbler was reported from Moylan, Pa., May 6 (Price). Other interesting Warbler records: Chestnut Hill, Pa., May 7, Orange-crowned Warbler (I. Starr, III); Chestnut Hill, Pa., May 7, Cerulean Warbler, 2 (Clark); Narberth, Pa., May 24, Mourning Warbler (West).

Ducks were abundant on the Susquehanna River at Harrisburg, Pa., April 22: Scaup, 1600; Buffle-head, 200; Ruddy Duck, 600; Shoveller, 200; Redhead, 200; Canvas-back, 600 (Frey).

There was a fine spring flight of shore birds along the New Jersey coast. The greatest concentration perhaps occurred at Stone Harbor, N. J. Here, on May 13, Clark reported thousands—Dowitchers (6000) and Semipalmated Sandpipers (6000) were the two most numerous species. White-rumped Sandpiper, 8, Hudsonian Curlew, 500, and Western Sandpiper, 3, were of special interest.

Bald Eagle nests, investigated by Schmid, Gillespie, Beck and others (April and May), were reported as follows—New Jersey, 2 nests with 2 young each, 5 nests deserted; southeastern Pennsylvania, 1 nest with 2 young; northern Maryland, 1 nest with 3 young; Delaware, 1 nest with 2 eggs, 2 nests deserted, 2 nests with 3 young each.

Other records of interest: Holmsburg, Pa., April 19, Holboell's Grebe, 1, in breeding plumage (Reimann); Penn Manor, Pa., April 18, Snow Goose, 8 (Cutler); Holmsburg, Pa., May 24, Double-crested Cormorant, 1 (Kessler); Frankford, Pa., May 26, Sora Rail, nest with 4 eggs (Miller); Whitemarsh, Pa., April 24, Long-eared Owl, nest with 4 eggs (Reimann); Ardmore, Pa., February 10 to May 6, 1153 Purple Finches banded, beginning in March to May 6, 154 Pine Siskins banded, June 6, Gray-cheeked Thrush banded (Groskin); North Hills, Pa., May 19, Dickcissel, female (Twining); Burlington County, N. J., June 4, Dickcissel, pair apparently breeding, first known record for the county (Walton, Haines, Ward, Potter); Tinicum, Pa., April 23, Caspian Tern, 2 (Price and Rigby) and April 23, Glossy Ibis, 3 (Higgons), May 14, 1 (Q. Kramer); Delaware City, Del., April 9, Glossy Ibis, 1 (J. Cadbury); Philadelphia, Pa., May 14, Lincoln's Sparrow, 1 (Q. Kramer); Central Airport, Camden, N. J., June 7, Prairie Horned Lark, pair apparently breeding (Regensburg), first record for Camden County; Fairview, N. J., April 15, Rough-legged Hawk, 1, Hancock's Bridge, N. J., April 16, Pigeon Hawk, 1, Baldpate, 150 (R. B. Fischer); Jarvis Sound, Cape May County, N. J., May 30, Red-throated Loon, 21—one was in breeding plumage (Daly and others); Mt. Holly, N. J., April 18, Blue-gray Gnatcatcher, 1 (Sprow); Narberth, Pa., June 16, Veery, nest with 3 half-grown young (West); Beverly, N. J., May 20, Pied-billed Grebe, nest with 5 eggs (Street); Medford, N. J., May 21, Blue-gray Gnatcatcher building nest (Reagan); Camden, N. J., May 28, Barn Owl's nest with 6 young—1 dead, apparently smothered—others about ready to leave (Batezel); Riverton, N. J., May 20, Barn Owl's nest with 2 young in cupola of old barn—Domestic Pigeon's nest with 2 eggs in same cupola (Street and Walton); Audubon, N. J., May 6, Barn Owl's nest with 6 eggs in the elevated cabin of a crane, used at intervals for moving material. Eggs were finally deserted, incubation well advanced (Haines); Salem County, N. J., May 10, Red-tailed Hawk's nest with 2 young (Miller); Burlington County, N. J., May 17, Long-eared Owl's nest with 5 young, 2 in nest, 3 in tree nearby, first record for the county, we believe (Haines).

In a special study of Crows, E. J. Reimann of 2285 E. Kennedy Street, Philadelphia, Pa., has banded 109 Crows around Philadelphia; 74 of these from Pennypack Park were marked with red bands. He will be interested in hearing from anyone who happens to see any of these birds.—JULIAN K. POTTER, *Collingswood, N. J.*

Washington (D. C.) Region.—During the months of April and May, 1939, in the Washington region, the weather was cool until the very last of May. Much rain fell during April, but little during May. Perhaps the cool weather had something to do

with the tarrying of the Ring-billed Gull, 10 of which were seen along the Potomac River, near Alexandria, Va., on May 16.

On the other hand, the Little Blue Heron appeared very early, 2 being seen at Wakefield, Va., the birthplace of George Washington, on April 9 by Charles P. Preston. The American Egret was seen along Hunting Creek, Va., on May 27 by W. B. McIlwaine, Jr. The Orchard Oriole, which seems this year to be more numerous than usual, was noted on an early date, April 24, at Hunting Creek, Va., by W. B. McIlwaine, Jr. Another bird that has been reported more frequently this spring than for many years is the Red-headed Woodpecker. Fifty individuals were seen on April 13, near Seneca, Md., by W. H. Lawrence; many there on April 16; and the species was noted by the writer more frequently than usual, also in the outskirts of Washington. Twenty Hudsonian Curlews, rare on the Potomac River, were seen on April 16 near Wakefield by Charles P. Preston. Rather more Wilson's Snipes have been reported this spring than ordinarily; and 30 were observed by Brooke Meanley near Poolesville, Md., on April 9. A Florida Gallinule was found dead on the road by W. B. McIlwaine, Jr., near Alexandria, Va., having evidently been killed by an automobile. The Dickcissel is a rare bird in the Washington region, but after a long period of years, during which it was apparently absent from this region, it is again on the increase. One was heard by the writer in a field near Rockville, Md., on May 7. The Golden-winged Warbler, which is one of the less common Warblers in this region, was reported on April 27 near College Park, Md., by Brooke Meanley; also by J. H. Fales at Woodside, Md., on May 6 and on several succeeding days. A Duck Hawk was seen at Seneca, Md., on April 30 by W. B. Lawrence. Perhaps this interesting bird may be again breeding in this area.

Ducks along the Potomac River this spring have not been particularly numerous. The following have been reported near Washington, in addition to the Blue-winged Teal, which seems, however, to be more common this year than usual: Mallard, Black Duck, Pintail, Lesser Scaup, and Ruddy Duck, most of these on the river near Alexandria, Va., on April 15 by W. B. McIlwaine, Jr. Additional species reported by Charles P. Preston, near Wakefield, Va., on April 9, are the Greater Scaup, Baldpate, Shoveller, Buffle-head (30 individuals), White-winged Scoter, American Scoter, Surf Scoter, Hooded Merganser, American Merganser, and Canvas-back. All of these, however, were in small numbers. On April 9, near Wakefield, an interesting record was made by Charles P. Preston, who saw an adult male European Widgeon in a small flock of Baldpates, and what was evidently the same bird again in the same region on April 16.

A number of interesting breeding records have been made during this spring, some of which may be worth while mentioning here. The Prairie Horned Lark is decidedly on the increase as a breeding bird about Washington. The writer saw a pair of adults and two young able to fly in a field near Rockville, Md., on May 7, apparently the same birds previously reported by W. H. Lawrence. A nest of this species containing 4 eggs was found on April 22 at College Park, Md., by Brooke Meanley. Three young Woodcocks, a few days old, were found near Falls Church, Va., on April 12 by G. A. Robinson. The nest of a Red-shouldered Hawk, containing 3 eggs, was found by W. H. Lawrence, near Seneca, Md., on April 16; that of a Barn Owl containing 6 young and another containing 2 eggs were noted near Laytonsville, Md., on April 23; also a Crow's nest, containing 5 eggs, near Seneca on April 13 by the same observer. He found at Four-Mile Run, Va., a very unusual nest of the Barred Owl in the natural cavity of an oak tree, only 1½ feet from the ground. When discovered, on April 9, the nest contained 2 downy young. An Oven-bird's nest containing 4 eggs was noted near West Grove, Va., south of Washington, on May 16 by W. B. McIlwaine, Jr.; but on May 30 the nest was found entirely destroyed, evidently by a Barred Owl that left telltale feathers. The same observer reported nests of the Redstart at Alexandria, Va., containing eggs on May 23; and of the Cardinal with 2 young on May 31, at Hunting Creek, Va. Another Cardinal's nest, seen by the writer, was built in a hedge near a well-traveled street in the built-up residential portion of the city of Washington.—HARRY C. OBERHOLSER, *U. S. Biological Survey, Washington, D. C.*

Pensacola (Fla.) Region.—Temperatures have been mild throughout the period and rainfall abundant during the second month. Roadside and woodland ponds are full to overflowing, but too late for the main flight of Solitary Sandpipers and Lesser Yellow-legs. A minor tropical disturbance neared the coast in the last two days of the period and caused half-gale winds and high tides that swept low-lying Least Tern and Black Skimmer colonies.

An Olive-backed Thrush, found dead on April 17 (Frank Bray), was the earliest of this species ever recorded here. Other arrival dates include: Yellow-billed Cuckoo, April 16; Acadian Flycatcher (Mrs. A. L. Whigham), Black-throated Green Warbler (the only one reported this spring), and Blue Grosbeak (very rare), April 22; Swainson's Warbler and Rose-breasted Grosbeak (both rare), April 23; Magnolia Warbler, April 30; and Gray Kingbird, May 14. Blue Grosbeaks were seen again on April 23 and 30 and May 7—oftener than I had ever before seen them in one season.

A pair of Swallow-tailed Kites, reported on May 14 near Montgomery, Ala., by H. W. Holden, Jr., are the only birds of this species recorded from that state for many years. Unmistakable in appearance, even from a brief glimpse, these birds were under observation for several minutes and approached near enough to the observer to permit a flight photograph to be made. A Horned Grebe on May 14 and a Loon on June 11, both in full nuptial plumage, were almost certainly cripples.

Several departing migrants stayed later than ever before recorded: Chipping Sparrow, last seen on April 23 (Mrs. Whigham); Purple Finch (Mrs. Whigham) and Duck Hawk, April 30; Black Duck (flock of 4), May 14; White-throated Sparrow, May 15 (Mrs. Whigham); Sora (1 brought in by a cat), May 24 (Eugene Mondeau); and Double-crested Cormorant, June 4. Other departure dates of interest include: House Wren and Blue-headed Vireo, April 16; Yellow Warbler (Alan Sheppard) and Ruby-crowned Kinglet, April 23; Myrtle Warbler, April 29 (Sheppard); Upland Plover, Herring and Bonaparte's Gulls, Rose-breasted Grosbeak (Mrs. Whigham) and Savannah Sparrow, April 30; Lesser Scaup, Lesser Yellow-legs, and Scarlet Tanager, May 6; Veery, May 8 (Mrs. Whigham); Oven-bird, May 9 (Sheppard); Catbird, May 10 (Mrs. Whigham); Olive-backed Thrush, May 13; Black-bellied Plover, Solitary and Least Sandpipers, and Ring-billed Gull, May 14; Spotted Sandpiper, May 20; Cedar Waxwing, May 21 (Sheppard); and Semipalmated Plover, Ruddy Turnstone (very rare in spring), Semipalmated Sandpiper, Sanderling, and Barn Swallow, May 28.

A pair of Ward's Herons, usually considered a colonial species, selected as solitary and conspicuous a nesting-site as could be imagined—an old Osprey nest in a dead pine standing on the edge of a marsh and visible for almost a mile in any direction. At some time during the week preceding June 11 the tree crashed in a thunderstorm and the 3 young birds, grown almost to the flight stage,, were killed in the fall. Red-bellied Woodpeckers were incubating on May 14, the first Least Tern nests were found on May 28, and a Bluebird's nest with 4 eggs (probably a third nesting) was seen on June 4.

Local nesting of the Least Tern and the Black Skimmer is being threatened by automobile travel on the beaches. The Tern is abundant and the Skimmer not uncommon locally, and both nest on the extensive sand flats along the Gulf beaches. The soft, yielding nature of the beaches (unlike those along the Atlantic Coast) has, until recently, made extensive exploration either on foot or by car almost impossible. Now, however, a light car with half-deflated balloon tires can travel the beaches with ease, and hardly a Tern colony goes unscathed. The drivers of the cars seem concerned only in getting from here to yonder by an unfamiliar route and do not even notice the populous colonies they pass through, but the tire tracks are spotted with broken eggs and crushed young birds. It is hoped that the National Park Service, which has recently taken over the whole 40-mile stretch of Santa Rosa Island, will take steps to prevent beach driving, at least during the months of June and July.—Francis M. Weston, *2006 E. Jordan St., Pensacola, Fla.*

Put-in-Bay (Ohio) Region.—Few generalizations as to migration during the spring can be drawn from the many reports avail-

able. From the confusing, often conflicting data, there emerges a picture of a migration much retarded by the inclement weather of late April and early May. From the second week of May until the close of the migration in the first few days of June the dates of arrival and departure seem to have been nearly normal although nearly every observer comments that a few species were unusually late. There is, however, no general agreement in different localities as to the species that were retarded.

Evidence as to the dates of the most conspicuous migratory movement is fairly consistent. The days from May 5 to 8 were the occasion of a great influx of species in most localities. This was notably true at such widely separated stations as Cincinnati (Maslowski and Goodpaster), Newark (Claugus), Canton (Ball), and at Put-in-Bay. The peak of abundance for most of the northward-bound migrants is variously reported to have occurred between May 17 and 23, and it was only at two northern stations, Toledo and Put-in-Bay, that the greatest migratory flights took place later than May 20.

Among the rarer migrants recorded during the period were: a Red-throated Loon seen near Cuyahoga Falls, April 16 to 18, by a number of observers (Mitchell and Smith); additional Holboell's Grebes seen at Cuyahoga Falls, April 16 (Smith), and at Pymatuning Lake, May 19 (Anderson, Hicks); American Egret, quite rare in spring, in three widely separated localities, Toledo, April 29 to May 15 (Stearns and Campbell), Columbus, April 28 to May 1 (Hicks, Thomas), and Dayton, May 28 (Burr); European Widgeon near Toledo, April 23 (Stearns, Campbell); Willets, presumably of the western race, at Pymatuning Lake, May 8 (McLaughlin) and at Toledo, May 30 (Anderson, Campbell); 500 Golden Plover near Toledo, May 2 (Stearns, Campbell); Least Tern near Toledo, May 30 (Anderson, Campbell); a Yellow Rail found dead at the base of the Perry Monument at Put-in-Bay, April 19; and a Nelson's Sparrow near Cincinnati, May 23 (Maslowski and Goodpaster).

Several observers in central and southern Ohio comment on the large numbers of Bewick's Wren that have been seen this spring, and the following records from the Lake Erie region suggest something of an extension of range: Put-in-Bay, April 23 to 25; Kelley's Island, May 7 to 10; Toledo, June 4 (Campbell). There is as yet, however, no proof that any of these individuals nested, and there is evidence that the one seen at Put-in-Bay did not remain long in the vicinity.

Apparently few observers in Ohio are favorably located with regard to Hawk flights. The islands in western Lake Erie offer exceptional opportunities to see these diurnal migrants. Although straggling Hawks were seen throughout the early spring it was not until April 22 that a large flight occurred, about 100 individuals, of which over half were Broad-wings. On April 23 there was another smaller flight, but a large number were seen on this day near Toledo, some thirty-odd miles to the west: Broad-wing, 50; Cooper's Hawk, 35; Red-shoulder, 30; Sharp-shin, 25; Red-tail, 30 (Stearns and Anderson, Campbell). At Put-in-Bay, Broad-wings and Sharp-shins were common almost daily until May 4 and the largest flight took place on April 25. The last flight of any consequence occurred on May 19 and included 8 Sharp-shins, 1 Cooper's Hawk and 4 Red-shoulders, the latter all in the first-year plumage. From Canton comes an extraordinary record of 2 Pigeon Hawks which were first seen May 1 and are, at the close of the period, still present, although not known to be nesting.

Among the many records of migrants that tarried in the region later than usual, the following seem especially noteworthy: Whistling Swan, May 19 at Pymatuning Lake (Anderson, Hicks) and at Toledo, May 26 (Campbell); Ruddy Duck near Newark, May 21 (Claugus); Old-squaw near Salem, May 15 (Baker); Black Tern in Clermont County, June 4 (Maslowski and Goodpaster); and Olive-sided Flycatcher at Put-in-Bay, June 3.

The large number of nesting records included in reports offers gratifying evidence that observers in the region are taking an active interest in the breeding birds. Space limitations prevent mention of most of these, which will, however, be noted later. —C. F. Walker, *Stone Laboratory, Put-in-Bay, Ohio.*

Chicago Region.—During April, slightly subnormal temperatures were recorded practically throughout except for a 5-day period in the last week when the temperature remained above normal. During May, the temperature fluctuated around normal with no significant extremes. Precipitation for both months exceeded the normal amount: in April there was rain on 14 days with traces recorded on an additional 8 days; in May the rainfall was less evenly distributed, the greatest amount (1.94 in.) falling on May 28.

Early arrivals as against previously recorded early dates (last column):

Semipalmated Plover	5– 4	LP	Dreuth	5– 5
Forster's Tern	4–27	LP	Dreuth	4–28
Kentucky Warbler	5– 7	W	C. O. S.	5–13
Clay-colored Sparrow	4–29	LP	Dreuth	5– 8

Late departures (some possibly summering non-breeders) as against previously recorded late dates:

Holboell's Grebe	5– 7	MS	Ward	4–28
Black Duck	5–25	MS	Nork	5– 5
Ring-necked Duck	6–14	W	Johnston	5–24
Ruddy Duck	5–25	MS	Nork	5–21
Semipalmated Plover	6–14	W	Johnston	6– 7
Least Sandpiper	6–14	W	Johnston	6– 7
Semipalmated Sandpiper	6–14	W	Johnston	6– 9
Sanderling	6–14	W	Johnston	6– 4
Caspian Tern	5–29	W	Nork	5–20

Other records of interest are as follows:

White-rumped Sandpiper	5–29	W	Nork
	also 6–14	W	Johnston
Baird's Sandpiper	5–29	W	Nork
Long-eared Owl	4–24	LP	Dreuth
Blue-gray Gnatcatcher	4–19	MS	Johnston
Prothonotary Warbler	5– 8	PR	Howard
Orange-crowned Warbler	4–23	LP	Dreuth
Cerulean Warbler	5–18	L	Johnston
Pine Warbler	4–23	R	C. O. S.
Prairie Warbler	5–21	LV	Black
Hooded Warbler	5– 7	L	Ward
Yellow-headed Blackbird	5– 7	W	C. O. S.
Nelson's Sparrow	5–23	LP	Dreuth
Bachman's Sparrow	5– 5	LP	Nork
Gambel's Sparrow	5– 6	LP	Dreuth
Smith's Longspur	4–26	LP	Dreuth

Key to localities: L, Lyons; LP, Lincoln Park; LV, Lake Villa; MS, McGuiness Slough; PR, Park Ridge; R, Salt Creek, Riverside; W, Waukegan.

Breeding Records: Mallard, ♀ with 9 young, May 30, McGuiness Slough, and ♀ with 7 young, June 14, Waukegan (Johnston); Red-shouldered Hawk, 4 newly hatched young and 1 infertile egg, May 14, McGuiness Slough, and 4 young, May 24, Maple Lake (Johnston); Piping Plover, 3 eggs, May 28, and another nest with 4 eggs, June 14, both on the Waukegan beach (Johnston); Common Tern, 8 nests with 3 eggs each, June 14, Waukegan beach (Johnston); Bank Swallow, "15 to 20" nests, May 28, Waukegan, and "at least 85" nests, May 30, Palos Park (Johnston); Brown Thrasher, 2 eggs, May 16, Lyons (Johnston); Yellow Warbler, pair observed completing nest, May 20, Lake Villa (Hawkins and Yeatter); Orchard Oriole, female weaving nest about one-half completed, May 25, Palos Park (Nork); Swamp Sparrow, 2 nests with eggs, May 20, Lake Villa (Hawkins and Yeatter).

General features of the latter six weeks of the spring migration were (1) absence of distinct waves of migrants replaced by a gradual increase and decrease; (2) low numbers of Vireos and Flycatchers; (3) lingering of water and shore birds, as indicated by several late records tabulated above and also by a report of 700 to 800 Gulls along the Waukegan beach on June 14, made up of Herring Gulls (70 per cent), Bonaparte's Gulls (26 per cent), and Ring-billed Gulls (4 per cent) [all approximate]; 4 individuals of the Ring-necked Duck (record given above), together with 42 Lesser Scaups, were present on that date on the Public Service Pond at Waukegan (Johnston).

While the migration of hylocichlid Thrushes as a group appears to have been normal among the individual species, an apparently larger number than usual of Olive-backed Thrushes was recorded; on the other hand, the number of Gray-cheeks was practically equal to the number of Veeries, while the usual case seems to be that the former should be the more numerous. In 74 field lists, representing all but 2 days in the period April 18 to May 30, the species percentages in the total number of Thrushes reported are: Olive-backed Thrush, 39 per cent; Hermit Thrush, 30 per cent; Gray-cheeked Thrush, 13 per cent; Veery, 12 per cent; Wood Thrush, 6 per cent.—Rudyerd Boulton and Frank A. Pitelka, *Field Museum, Chicago, Ill.*

Minnesota Region.—The migration of the smaller land birds during the latter part of April and through May did not follow the usual normal sequences. Most observers reported that there were no well-marked waves of migrants. The birds came, or

course, and those that were bound farther north passed through but there were no 'big days' such as are the delight and confusion of the bird-lover in the spring. A succession of brief hot spells interspersed with longer cool ones and cold nights with temperatures in the 40's and lower 50's and persistent north winds may have had something to do with the disorganization of the migration. There was a severe two-day snow and rainstorm throughout the state on April 16 and 17. Frost occurred as far south as Minneapolis on May 12 and frequently during the month farther north. The ice went out of Lake Minnetonka on April 18. There was still ice in the lakes farther north and a vast field of ice in Lake Superior. A 60-mile windstorm developed widely in the Twin Cities area early on June 7, and, in the great destruction of trees and shrubbery, must have wrecked many nests. The April rainfall was deficient and drought conditions were imminent in the western part of the state, but this has been more than made up in May and June. Vegetation is luxuriant over most of the state, crops are doing well, and the berry yield is abundant.

Mr. Swedenborg says of the spring migration at Minneapolis: "We saw as many species as usual but probably not as many individuals. The foliage became dense early and we missed a lot. Three species seemed unusually numerous, the Yellow-headed Blackbird in all suitable places, the Dickcissel abundant, and the Grasshopper Sparrow. My most unusual find was an Arkansas Kingbird on May 7." A nest of the latter bird was found by Mr. Breckenridge not far from Minneapolis on May 31, the first record of the nest in eastern Minnesota.

Miss Eleanor B. Jilson writes from Frontenac, on Lake Pepin, usually one of the best 'birding' places in the state: "As was the case in 1938 there were no real 'Warbler days'; only the Myrtle and Tennessee were numerous. No large flocks of Swallows came. The Red-backed Sandpiper was the most common of the shore birds on the mud flats."

Miss Olga Lakela, of Duluth, reported on May 26: "Many Warblers are here. Flocks of shore birds are just beginning to come. Very cold, foggy and windy, ice still in Superior Bay along the beach." Under such conditions, on May 25, were seen Red-backed Sandpipers, Ruddy Turnstones, and 1 Hudsonian Curlew, and, on the 27th, 1 Knot (2 later) and a flock of 50 Black-bellied Plovers. Several pairs of Piping Plovers are again nesting on Minnesota Point. Earlier in the season (April 16) Miss Lakela was certain that she saw 2 Glaucous Gulls and 2 Iceland Gulls in the Duluth Harbor. They were with Herring Gulls, sitting in a row on the canal pier, which made comparison easy. Dr. Abbott, of Duluth, sent us a specimen of the Iceland Gull taken near Grand Marais, which is our only record of that species.

Space will permit the inclusion of only a few migration dates from the Twin Cities area. These are mostly from reports submitted by Mr. Swedenborg and others and may serve to indicate the character of the season.

April 16, Horned Grebe. 19th, Bonaparte's Gull (aver. April 30). 21st, Myrtle Warbler. 23d, Chipping and White-throated Sparrows. 28th, Sora. 29th, Barn Swallow. 30th, House Wren, Brown Thrasher, Palm Warbler. May 2, Florida Gallinule. 3d, Least Flycatcher. 4th, Chimney Swift. 5th, Towhee, Magnolia Warbler. 6th, Nighthawk, Warbling Vireo, Black-poll Warbler, Baltimore Oriole, Rose-breasted Grosbeak. 7th, Catbird, Wood Thrush. 13th, Kingbird. 25th, Dickcissel.

The more abundant water has induced a large number of Ducks to nest this year in the Twin Cities area (a radius of 30 miles), the most notable species being a few Baldpates and a surprisingly large number of Wood Ducks, far more of the latter than for many years past. On May 30, at the Long Meadow Sloughs not far from Minneapolis, 29 males were counted with the aid of a 50-power telescope in one not very large sector of the slough in front of the Gun Club. There must have been many more. Memory does not recall such a sight. Mr. Breckenridge, who is familiar with the bottomlands of the Mississippi River above Lake Pepin, suggests that the cutting off of the timber preparatory to the damming and flooding of that area may have forced the usual population of Wood Ducks in that region to seek other nesting places.—Thos. S. Roberts, *Museum of Natural History, University of Minnesota, Minneapolis, Minn.*

St. Louis Region.—The last half of April was rainy and chilly, turning into nearly hot weather that lasted until about May 15, when the temperature lowered again, with almost daily rains, but no storms. Up to June 15 fairly cool weather and rain still prevailed, but there have been no floods or storms.

A bird event of great importance here was the finding of what was later proved to be the rare Glossy Ibis. On May 20, near the Dardenne marshes in St. Charles County, two young men, Lucien Fouke and William Holzmark, saw what they described to Miss Ernst, who was out birding in that region, as "birds with decurved bills, the strangest birds they had ever seen." The young men, Miss Ernst, armed with her 60x telescope, and Wayne Short, who later joined the group, found them feeding unconcernedly on the shallow overflow of the Dardenne marsh. Watched at great length, the powerful telescope brought out every marking on 8 Glossy Ibises, and Holzmark took several pictures with his Leica camera when they got closer, but a shot disturbed them. Later they returned and a closer picture was obtained of them, which has since been used in a St. Louis paper. The only previous report was 100 years ago when a man named Cook reported Glossy Ibises seen near St. Louis. On May 21, Short got another view of this group of accidentals settling for the night in the top branches of a heronry where, beside the Ibises, there were several Egrets and Little Blues, part of the latter in blue plumage, some in white and others white splotched with blue.

On May 13, Short and Miss Ernst found 14 species of Sandpipers and Plovers, with 2 Golden Plovers in full breeding plumage, near Alton Dam. These were in company with a dozen rare transient Black-bellied Plovers. On May 3, Short and Sydney Heckler found a flock of American Pipits, one of which, much lighter than the rest, with little or no color below, they believed to be Sprague's Pipit.

George E. Moore reports from Lebanon that the nesting of some birds, noticeably Robins, was delayed by cool, wet weather. While there were no storms to blow the nests down, many rains have resulted in considerable loss among nestlings. Blue Jays, almost entirely absent during the winter, returned in goodly numbers April 26. Red-headed Woodpeckers have almost disappeared from that locality and the first arrivals, April 25, were few in numbers. Ducks and Geese were seen in increased numbers during late winter and spring, and his last date was June 1 when he saw a single Scaup. Shore birds have been few, but of special note might be mentioned White Pelicans in a large flock on April 28, and a Wilson's Phalarope on May 13. He notes that in recent years more of both American and Snowy Egrets have been seen, indicating increasing numbers and more of them nesting further north than previously. Herring Gulls left Lake Ozark by May 24, but many Black Terns were seen there on May 25. Bob-whites are more plentiful, Hawks almost entirely missing, Eagles and Ospreys fewer than usual, Dickcissels returning, Warbler migration normal, but resident nesting Warblers fewer. A Great Blue heronry by the Gasconade River near Waynesville is thriving, most of the nests occupied with young on June 7. William Crawford, park naturalist, discovered a nesting pair of Woodcock with 4 young hatched on June 13. In the yard of S. P. Jones, Webster Groves, is a bird seen daily that does not run true to form. On May 10 an undersized Thrush with a much-lighter-than-Thrasher tawny head and back appeared, and at first glance looked like a Veery. Closer inspection showed small-sized brown spots arranged in streaks on its clear white underparts. Alert, friendly, fearless of people, the back is not so light now as the head, the breast-spots are larger and it sings a not very good Wood Thrush song almost continuously. On June 15 a fledgling Wood Thrush with darker brown and larger spots appeared, but no parent bird seemed to look after it.—Sterling P. Jones, *Webster Groves, Mo.*

Rio Grande Delta Region.—Until the last week of May the weather was relatively cool for this season of the year. Rainfall has been above the average for past years, and this excess has helped to decrease the accumulated deficiency. Grasses, weeds, and shrubs are growing rapidly and there is a great abundance of bird-food of all kinds

A thunderstorm, accompanied by a 35-mile-per-hour wind, did considerable damage to nests on May 13. The heavy rainfall during the storm caused the flooding of almost all nests in the coastal prairie areas covered by 'salt grass' and alkali weed associations.

There was a great scarcity of Kingbirds and Flycatchers, especially the *Empidonax* group, throughout the spring migration. This was remarked upon by Mr. Hale in his report from the Mission area and was noted by the writer in Cameron County. The same thing was true of Mourning Warblers and Franklin's Gulls. The few numbers of the last-mentioned species correlate with the few fall migrants that came this way in 1938. Several migrants were quite late and even some breeding species were slow in showing up in their usual haunts. The Groove-billed Ani, which is found in winter some years, was not recorded in Cameron County until May 7 and not observed by Mr. Hale at Mission until May 22. Possibly the most interesting record was that of a Macgillivray's Warbler at Laguna Vista on May 14. It was observed by the writer for some time at quite close quarters.

Mr. Hale's first-seen dates from Mission are as follows: April 16, Osprey, Franklin's Gull, Blue Grosbeak. 17th, Red-eyed Cowbird, Azure Bluebird, Wilson's Warbler, Magnolia Warbler, Sycamore Warbler. 19th, Louisiana Water-Thrush. 22d, Wood Pewee, Barn Swallow, Blackburnian Warbler, Tennessee Warbler, Cerulean Warbler, Redstart. 23d, Stilt Sandpiper, Least Tern. 24th, Warbling Vireo, Red-eyed Vireo, Northern Water-Thrush, Chestnut-sided Warbler, Veery, Catbird, Baltimore Oriole, Scarlet Tanager. 27th, Olive-sided Flycatcher, Rose-breasted Grosbeak. 29th, Least Flycatcher. May 3, Alder Flycatcher. 4th, Texas Nighthawk.

Some Cameron County records are: April 16, Wood Pewee, Texas Nighthawk, Least Tern, Upland Plover, Indigo Bunting. 19th, Redstart. 23d, Baltimore Oriole, Scarlet Tanager, Kingbird, Chestnut-sided Warbler, Blackburnian Warbler. 25th, Botteri's Sparrow. 30th, Golden-winged Warbler, Canada Warbler, Buff-bellied Hummingbird. Cameron County records by other observers: Oven-bird (May 2) and Bay-breasted Warbler (May 3) by Neil Hotchkiss; Olive-backed Thrush (May 2) and Gray-cheeked Thrush (May 3) by Anna May Davis.

Last-seen dates for Cameron County: April 4, Red-breasted Merganser, American Pipit. 14th, House Wren. 16th, Red-tailed Hawk. 23d, Louisiana Water-Thrush, Clay-colored Sparrow. 25th, Lincoln's Sparrow. 30th, American Bittern, Belted Kingfisher. May 7, Cedar Waxwing, Catbird, Gray-cheeked Thrush. 14th, Redstart, Magnolia Warbler, Blackburnian Warbler, Parula Warbler, Rose-breasted Grosbeak. 20th, Northern Crested Flycatcher. 21st, Chimney Swift, Osprey. 28th, Marsh Hawk. Mr. Hale reports the Grasshopper Sparrow present at Mission until May 15.

Grebes disappeared from the open ponds in Cameron County about the middle of May; however, they are still plentiful in some places which are heavily overgrown with cattails, such as Horseshoe Lake about 4 miles south of Harlingen.

On the afternoon of April 23 two flocks of Gadwalls, two mixed flocks of Shovellers and Blue-winged Teals, and two flocks of Fulvous Tree-ducks were observed migrating 'at sea' in a period of 45 minutes. This would seem to indicate that there is still a fairly heavy migration along the coast at this date. Earlier in the spring there is an almost constant flight of large flocks on migration days. The Ducks fly low over the water, keep well out beyond the breakers (one-fourth to one-half mile off shore) and follow the coastline. At the end of May there was still a considerable number of Baldpates, Gadwalls, and Shovellers present in the marshes at San Martin Lake. (The level of this lake had just been raised 1 foot by the mid-May flood and presented the best appearance it has shown in several years.)—L. Irby Davis, *Harlingen, Texas*.

San Francisco Region.—Renewed incentive for listing birds in an area is provided by the rare discovery of a species far outside its normal range. This year a freakish occurrence as to both place and season was the appearance of a Water-Turkey, discovered on June 2 by Gordon Bolander at the north part of Lake Merced, San Francisco. Subsequently, this lone individual was observed by many persons, up at least

to June 14 (Parmenters). An earlier record for southeastern California, more than 25 years ago, was also a sight record. Whether or not the 1939 bird is finally judged to be an example of natural wandering of this tropical species, it has already been the subject of much interest on the part of San Francisco bird students. They welcome this unexpected opportunity to become acquainted with a strange bird, even if it is out of its usual surroundings.

Other notable occurrences this season: Black-footed Albatross, 13 seen over ocean 5 miles northwest of Cypress Point, May 7 (Williams and others); Sooty (?) Shearwater, about 3000 in raft feeding south of Mussel Rock, May 11 (first last year on May 6) and noted 9 times in the interval, a line 16 miles long and extending from Montara to near the Golden Gate contained about 20,000 birds, a large raft of about 10,000 was feeding off Thornton on June 14 (Parmenters); White Pelican, 50 near Los Baños, May 24 (Allen); Brown Pelican, only one at Santa Cruz on May 15 (A.); Clapper Rail, one at Carmel River-mouth lagoon, a first record for this vicinity and a southward extension of range, April 20 (W.); Black Swift, one between Point San Pedro and Montara Point, May 12 (P.); Arizona Hooded Oriole, male in Maxwell Park district of East Oakland, June 16 (Seibert).

Reports on migrating birds are less extensive than usual; comment on a few species will show the trend. Black Brant noted regularly in Carmel Bay up to April 29, and 2 seen on May 7 (Williams), 86 at Tomales Bay, 73 at Bodega Bay on May 1, and 10 flying northward off San Francisco beach on June 3 (Parmenters); Buffle-head, female at Carmel River-mouth lagoon, May 7 (Williams); Surf Scoter, 50 on Tomales Bay, May 1, 18 at San Francisco beach, and 83 near Mussel Rock, June 5 (P.); Lesser Yellow-legs, 8 at Sears Point, April 17, last seen (Allen); Northern Phalarope, sudden, large influx on Monterey Peninsula on May 5 (W.), thousands at Dumbarton Bridge on May 6, none after May 28 (A.); Olive-sided Flycatcher, Carmel, April 17 (W.); American Pipit, last seen in Oakland, April 19 (Seibert); Golden-crowned Sparrow, last observed at Carmel, May 1 (W.), Tilden Park, April 27 (A.).

Several observers report that few nests were found this year as compared with other years in the same places and where equal effort was expended. At a ranch in Reliez Valley Mrs. Allen observed 26 species on May 13, 1938, but could find only 10 species on May 8, 1939. This year the creek there was dry. Not only were there fewer land birds in some localities, but nesting in many species was carried out with poor success. A surprisingly large number of nests were never completed or they contained small sets or infertile eggs.

The reduced crop of young birds this year followed a season of small rainfall, and the early maturing of plants along with the shortage of water no doubt provided important inhibiting influences on nesting. Conditions on the range on May 1 were approximately two-thirds as good as a year ago and 10 per cent poorer than a ten-year average. Several cool periods tended to delay drying of the soil and plants, but they also interfered with the nesting.

A few nesting records have been selected from a long list. American Merganser, 2 broods of young in Nacimiento River, southern Monterey County, early June (Silliman); Sparrow Hawk, the 5 eggs laid in Oakland by March 21 began to hatch on April 27, and the first young left the box on May 24 (Seibert); California Quail, families out on May 7 and 18 and June 3 (Allen); Florida Gallinule, pair with 6 small young at Los Baños, May 24 (A.); Screech Owl, young heard in nest box in Berkeley after June 12 (A.); Texas Nighthawk, set of eggs south of Tracy, May 16 (Pulich); White-throated Swift, 2 at Devil's Slide, apparently nesting, June 5 (Parmenters); Western Gnatcatcher, 6 nests near Livermore on May 7 ranged from ones just started to ones containing small young [one held a Cowbird's egg] (Seibert); Bush-Tit, second brood reared in and left a nest in Berkeley, before June 14 (A.); House Wren, a singing bird remained near some birdhouses in Oakland from April 10 to 27 and then left when no mate had been obtained (Seibert); Orange-crowned Warbler, brood out of nest at Berkeley, May 11 (A.); Cowbird, 2 eggs in deserted nest of Red-wing near Stockton, May 23 (Pulich).—JEAN M. LINSDALE, *Museum of Vertebrate Zoölogy, Berkeley, Calif.*